

INUPIAT PARTICIPATION IN THE WAGE ECONOMY: EFFECTS OF CULTURALLY ADAPTED JOBS

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Abstract. This study examines the effects of high paying, culturally adapted local jobs on Inupiat participation in the wage economy. Using tax revenues from Prudhoe Bay oil properties, the North Slope Borough created large numbers of jobs in construction and in government operations services. A 1977 survey of the Inupiat population found that Inupiat female labor force participation rates were quite high, approximating national norms. However, Inupiat men participated in the wage economy at levels substantially below national norms. Inupiat men of varying ages continued to maintain a bicultural pattern of economic activity in both the wage and subsistence economies. This study suggests that for northern Native men, much more than for women, cultural as well as economic factors explain low labor force participation.

INTRODUCTION

This study examines the response of North Slope Inupiat to large numbers of high paying local job opportunities partially adapted to Inupiat cultural patterns. These jobs were created by a local Inupiat government, the North Slope Borough, using tax revenues from Prudhoe Bay oil properties on Alaska's North Slope.

This situation provides an opportunity to examine the importance of two different explanations for the low labor force participation rates typically found among northern Native groups. The first is economic. According to this view, the major causes of high unemployment and low labor force participation are the lack of available jobs in northern communities and the lack of appropriate job skills in the Native population. The fundamental policy remedies are seen as job creation, Native hiring mechanisms, and occupational training.

The second explanation for low labor force participation is cultural. According to this view, northern Natives prefer to participate in the traditional economy based fundamentally on the seasonal harvesting of renewable resources. As the *Report of the Mackenzie Valley Pipeline Inquiry* argues, "Very few are seeking permanent employment in the industrial system . . . what they seek is employment on a seasonal basis as part of a wage-and-subsistence economic mix"

(Berger 1977:135). Advocates of this view urge the adaptation of work situations to cultural patterns, for example, accommodating intermittent work styles and placing jobs under Native control so that job distribution and work rules reflect cultural values.

The North Slope Borough's Local Hire Program included both sets of policy remedies. The Borough created high paying construction jobs in its Capital Improvements Program which did not require men to leave home and which permitted subsistence leave and work absences. Inupiat women were attracted to the large numbers of Borough jobs in the clerical, service, and paraprofessional areas. While these latter jobs were less adapted to cultural preferences, some change occurred, such as occasionally allowing children at the office.

If the economic explanation is valid, this situation should have resulted in high labor force participation among North Slope Inupiat. If cultural factors are also important, this situation should have resulted in only moderate labor force participation. Indeed, the availability of high paying, culturally adapted jobs should have provided greater opportunity for the expression of cultural preferences for part-year participation in the wage economy.

Under the relatively favorable labor market condition occurring on the North Slope, the labor force participation rates of Inupiat women were

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quite high, indeed approximating those of women nationally. However, Inupiat men of varying age levels participated in the wage economy at levels substantially below national norms. The results of this study are consistent with the view that for northern Native men, much more than for women, cultural factors are important in explaining low labor force participation.

RELATED RESEARCH

While many studies of northern Native labor force patterns have been done, this research is difficult to locate. As Burch (1979) points out, workers in applied research fields do not usually write for journal publication. They tend to write reports for government agencies, Native organizations, and other groups. These reports are not widely circulated and vary in methodological quality.

We have attempted to contact Canadian and Alaskan researchers doing work on northern Native employment as well as government agencies sponsoring such studies. Considerable recent work has been done in Canada, much of it stimulated by the Mackenzie Valley Pipeline Inquiry. However, very few studies of this type have been conducted in Alaska. This literature review does not attempt to be exhaustive. Rather it briefly considers four central issues in northern Native labor force research: (1) the desirability of wage employment, (2) northern Native responses to job opportunities, (3) culturally adapted job situations, and (4) sex and age differences in labor force patterns.

THE DESIRABILITY OF WAGE EMPLOYMENT

The low labor force participation rates and high unemployment among northern Native groups is widely viewed as a major social concern. Many government agency reports attempt to document the severity of the problem (e.g. Native Council of Canada and Native Employment Division 1977; Brown et al. 1981; Meldrum and Helman 1975). Other studies evaluate the success of various government-assisted strategies to increase Native employment. In Canada, for example, programs have been developed to relocate Native workers (Lloyd 1974) and to assist Native groups to establish their own job development and training approaches (Bureau of Management Consulting 1980; Bureau of Management Consulting 1981; DPA Consulting 1980; Williams and Scott 1979).

In the Canadian North, however, the issue is not only how to increase Native employment but also whether greater wage employment is in fact desirable. Asch (1977), for example, views wage labor as more of a problem than a solution to the economic insecurity of Native groups. He

argues that the well-paying seasonal jobs in oil and gas exploration go primarily to young and often unmarried men. Thus, wealth is concentrated in the hands of those with the fewest economic responsibilities and expended to a large extent in alcohol and personal luxuries. Not only does wage labor exacerbate alcohol problems, it also creates invidious distinctions "between the rich young, who work for wages, and the seemingly poor young men, who collect bush resources for the family" (Asch 1977:56). Brody (1977) similarly sees wage labor as creating social problems, such as increased dependence on an unstable source of income, loss of country foods, and decreased status for those who engage in hunting.

The Mackenzie Valley Pipeline Inquiry endorsed the view that wage employment dangerously eroded Native society and the traditional land-based economy. "If we build the pipeline now, the native people's own land-based economy will be further weakened or even destroyed, and many of them will be drawn into the industrial system against their will. They strongly oppose this prospect" (Berger 1977: 116).

It is by no means clear, however, that northern Native groups oppose expanded employment opportunities, particularly when jobs are not linked to locally intrusive development projects. Indeed, much of the Native testimony at the Mackenzie Valley Pipeline Inquiry, as Berger (1977:116) acknowledged, concerned "indignation" at the "failure so far of large-scale industrial projects to provide permanent wage employment." Similarly, in a study of 67 Inuit working in Pan Arctic's 20 days on/10 days off rotation employment program, Roberts (1977) found that over 90% wanted to work for longer periods. The Inuit had averaged 14.5 weeks of work.

Additional support for the view that northern Natives want more employment opportunities comes from an assessment of the impact of the Income Security Program for Hunters and Trappers among the James Bay Cree. Salisbury (1979) found that the guaranteed income payments per man-day of harvesting substantially increased the number of Cree involved in full-time harvesting. However, no decline was found in the number of Cree seeking wage employment in the summer. Moreover, despite the financial support for hunting, a 1977 survey of 1710 Cree found that 45% of those making suggestions felt a need for more jobs in the community, that 39% of the men would take "any kind of work," that 77% of the men would consider moving from the settlement for work, and that a large majority preferred part-time to full-time hunting (Salisbury et al. 1979).

Whether wage employment brings severe negative social consequences, at least in the short term, has also been challenged. Kupfer

and Hobart (1978), for example, report limited problems arising from Gulf Oil Canada's rotation work program in 1972-1973. Gulf representatives offered men from the community of Coppermine employment in the Mackenzie Delta drilling program in a two week, 12 hour a day work schedule followed by a one week break at home. The researchers found almost unanimous approval of the work program among the Inuit men, women, and children interviewed. The increased cash flowing into the community was spent primarily on useful goods. There was some increase in alcohol consumption and injuries from violence, but these were transitional effects which disappeared.

A review of the social and economic impact of the 1980 Beaufort Sea Drilling Program which employed 338 northerners, primarily from Tuktoyaktuk and Inuvik, similarly found little abrupt social and economic change (Bertolini and Foster 1981). The number of hunters and trappers rose during the period of offshore oil exploration. Layoffs occurred prior to the opening of hunting and trapping seasons. Liquor related offenses in Beaufort Sea communities did increase during the late 1970s when employment grew. However, no comparative data are presented which would indicate whether or not this increase represented a general trend.

While the desirability of wage employment is a matter of policy debate in Canada, this question is not much discussed in Alaska. In most Alaska villages, living predominantly off the land is no longer a viable option. While individuals may choose a hunting and trapping life style, the household as a whole needs a substantial cash income for fuel, utilities and housing payments, TV and telephone, and other goods. With the use of snowmachines, boats, and airplanes for hunting, subsistence itself requires considerable outlays of cash.

Many of the Native regional corporations established under the Alaska Native Land Claims Settlement Act view creation of local employment opportunities as a major corporate goal. Native legislators and Native organizations criticize government employment statistics for understating the severity of the rural employment problem and have sponsored alternative surveys (e.g. Brown et al. 1981). The North Slope Borough, the concern of the present study, viewed "full employment" as a primary policy objective and vigorously pursued strategies to obtain local jobs for the Inupiat population.

NATIVE RESPONSES TO JOB OPPORTUNITIES

Studies of the response of northern Native groups to job opportunities indicate that a large proportion of men work intermittently rather than for long periods of time. However, these studies primarily examine responses to employ-

ment in mining, oil and gas, and other projects involving long hours, difficult working conditions, and long stays away from home.

Lloyd (1974) has summarized 12 Canadian government and industry sponsored programs to provide employment for northern Natives either through permanent relocation or through rotation employment. He found that virtually all workers participating in "permanent" relocations left the employment site and returned home or to other northern communities. Rotational programs were more effective, but rates of retention remained low. During 1970 to 1973, for example, the Anvil Mining Corporation hired 97 Native employees (137 total hirings) to work in an open pit lead/zinc operation and a coal mine. Of the 137 hirings, 77% ended in six months or less. The majority of these terminations (64%) occurred when the men left voluntarily. During 1973-1974, Gulf Oil Canada hired 59 Coppermine residents during the winter oil exploration program. Of these, 54% quit before the end of the season.

Native employment in more recent projects in Alaska and Canada similarly tends to be intermittent rather than long-term. Hobart (1976) found a pattern of short job tenures in his study of rotation work programs in the Northwest Territories. Of Inuit men employed at the Nanisivik Mine on North Baffin Island, 45% worked no more than two months and only 14% remained more than a year (Baffin Region Inuit Association 1979). This high turnover rate was attributed primarily to the six week work period, which created prolonged separation from family, and the lack of opportunity to hunt.

Studies of Alaska Native employment on the Trans-Alaska Pipeline Project indicate a similar pattern. During the four year construction phase, a relatively large number of Alaska Natives (5,770) were employed (Naylor and Gooding 1978). However, over half of all Natives hired worked only eight weeks or less, and 25% worked two weeks or less. The most common reason for job termination was voluntary resignation. The reasons for the short job tenures on the Trans-Alaska Pipeline Project are not well understood. Native counselors and company officials attribute the high turnover to difficulties in adapting to 10-hour work days and periods of four weeks or more away from home, conflicts with subsistence activities, and problems with white co-workers (Naylor and Gooding 1978). Strong (1977) attributes the high turnover to Native workers' views that their labor was not used intelligently. He also argues that many Native workers perceive wage work as a temporary occupation and return home when needs for winter groceries or subsistence gear are met. In sum, it is not clear to what extent this high turnover on the pipeline resulted from poor working conditions and to what extent it resulted from cultural preferences for part-year work.

CULTURALLY ADAPTED JOB SITUATIONS

Rotation employment programs, particularly those that do not schedule employment during peak hunting seasons, provide some accommodation to the subsistence activities of northern Native men. In some circumstances, however, work situations in Canada have been more specifically adapted to northern Native cultural patterns. For example, the Kitwanga Sawmills accommodate seasonal absences of Indian workers by hiring part-time help from the community (Bryant et al., n.d.). It is accepted as part of the employment culture that workers may quit and be hired several times. The Slave River Sawmill in Ft. Resolution similarly provides employment for about 30-35 men "in a manner consistent with the maintenance of traditional economic activity" (Berger 1977:123). The mill closes down in the spring during beaver and muskrat hunting season, and men can take time off during other seasons to go hunting.

A more extreme example of culturally adapted wage employment is the Co-op at Fort Wrigley (Asch 1977). A Native board of directors runs the operation in ways that enable people to pursue subsistence activities and that also increase equity of income distribution. Many jobs are part-time and preference is accorded family heads.

While such culturally adapted employment structures are of interest in Alaska, no systematic research has examined situations where such adaptations may be occurring. The present North Slope study attempts to determine the effects of a relatively large scale attempt to provide local jobs adapted to Inupiat skill levels and life styles.

SEX AND AGE DIFFERENCES IN NORTHERN NATIVE LABOR FORCE PARTICIPATION

Most studies of northern Native responses to job opportunities involve men working in mining, oil and gas, and other development projects. Little explicit attention has been given to labor force participation among northern Native women. Government labor force statistics generally show that Native men have a substantially higher labor force participation rate than women (Meldrum and Helman 1975; 2(c) Report 1976; Native Council of Canada and Native Employment Division 1977).

However, there are some indications that Native women may be more interested than men in conventional wage employment. In a study of the work adaptations of Alaska Native men and women to urban employment, Jones (1976) found that women made a more stable work adjustment. Native women were also found to work longer periods on the Trans-Alaska Pipeline, even when sex differences in types of jobs

held were controlled (Naylor and Gooding 1978). Salisbury (personal communication, 1982) notes that in his recent research on family decision-making among the James Bay Cree, the wives in settlements were exerting influence against moving to the bush as they were more involved in the idea of having a career in the settlements.

The national increase in labor force participation among women and the growing educational interest in encouraging women to seek non-traditional careers may have significant effects on the cultural patterns of northern Native groups. The response of Native men and women to employment opportunities and their social implications requires careful study.

Another important area concerns age differences in labor force participation. The common expectation is that the younger generation, more educated in western skills and less educated in subsistence skills, will prefer wage employment. Surveys of labor force participation rates generally show higher labor force participation among young adults (Native Council of Canada and Native Employment Division 1977; Meldrum and Helman 1975). However, in some communities men in the 45-64 year age group participated in the labor force as much as or more than 20-44 year old men (Meldrum and Helman 1975). The choices of young Native men and women concerning participation in the wage and subsistence economies and the bases of these patterns require attention.

METHODS

The findings reported in this paper are based on a household survey conducted on the North Slope from October 1977 to February 1978. We selected all households in the small communities of Point Hope, Wainwright, Nuiqsut, Kaktovik, and Anaktuvuk Pass and a 50% simple random sample of all non-institutional households in the regional center, Barrow. Data from Barrow are weighted to reflect the proportion of Barrow adults in the total North Slope population. Two small northern communities, Point Lay and Atkasook, were not surveyed since they were being resettled. Within selected households, we randomly designated an adult member of the household (18 or older) to be interviewed.

The final sample consisted of 290 adults, 75% of the 385 adults contacted. The labor force patterns presented in this study concern the prime age working population, ages 18-54. We excluded adults above 55 so that cultural differences in retirement ages would not affect comparisons to national labor force patterns. These employment analyses are based on 238 Inupiat adults, 129 men and 109 women.

The interview questions were developed from exploratory interviews on employment and subsistence patterns with 30 Inupiat adults. These

interviews were conducted by Rosita Worl, an anthropologist living on the North Slope and working for the Borough government. Inupiat leaders reviewed draft interview questions, and questions were pretested among Inupiat residents. The revised interview schedule was translated into Inupiaq. Twenty-four percent of our sample chose to use Inupiaq in the interview. With the exception of a small proportion of interviews in Barrow, the interviewing was conducted by trained Inupiat employees. Respondents received \$10 for their assistance.

The survey requested information in three areas relevant to labor force behavior:

1. *Wage employment.* For every job held between October 1976 and September 1977, the respondent was asked: a) the type of occupation, b) employer, c) whether the work was done in his home community or elsewhere, d) hours worked per week, e) pay level, and f) number of weeks worked. If the person had left a job, he was asked why he or she had stopped working; for example, because of desire to go hunting, the job had ended, or the pay was not enough.

Persons who did not hold any paying job during 1977 were asked whether there were special reasons that prevented them from doing so. Each respondent also indicated whether there were any months between October 1976 and September 1977 when he or she wanted a job and did not have one and, if so, which months these were. The interview also contained questions about preferences in work schedules and the type of job, if any, held in 1970, the time of the most recent census.

2. *Subsistence activities.* For each month of the year, the respondent was asked whether he or she had participated in any of 13 major North Slope subsistence activities (such as working on a spring whaling crew, fishing, hunting seal, etc.), and also whether he or she had done these activities "most of the time during a month" or "part-time, such as after work or on weekends."

An annual index of subsistence effort was developed from these questions. This scale ranks subsistence effort as high, medium, or low on the basis of the number of subsistence activities the person engaged in and how much time the person spent in each activity.

3. *Background information.* To examine relationships between personal characteristics and labor force participation, the interview requested background information in four areas: a) general education and vocational training, b) urban exposure, such as whether the person had spent three months or more outside the North Slope working or getting schooling, c) childhood socialization, such as parental education and employment patterns, and d) current characteristics such as age, sex, head of family, number of children, receipt of transfer

payments in the household, and so forth.

While we attempted to minimize problems of misunderstanding of survey questions by such means as extensive pretesting, Inupiat interviewers, and use of an Inupiaq translation, the information collected has important limitations. For example, the survey asked the respondent to list all jobs held during the previous year. In a population where many adults work intermittently, periods of unemployment may be hard to recall accurately. Another limitation to the accuracy of our historical labor force comparisons is the unreliability of 1960 and 1970 census information in rural Alaska. We have tried to use considerable caution in interpreting census information and have focused on changes in labor force patterns that are so large that they are unlikely to be explained by errors of measurement.

MEASURING LABOR FORCE STATUS IN THE INUPIAT POPULATION

Labor force participation is difficult to measure among Inupiat and other Native American population groups who do not necessarily hold conventional year-round jobs. According to the census definition, a person is "in the labor force" if he or she is either a) employed or b) unemployed and looking for work. For a person to be unemployed (and thus counted in the labor force), he or she must be *actively seeking work*. In small Native communities, people may not be actively looking for work because they are aware that no jobs are available at the time ("discouraged workers"). To address this problem, the North Slope survey measured monthly unemployment by asking not whether the person was looking for work that month but rather whether the person *wanted work*. Each person was asked, "Were there months between October 1976 and September 1977 when you wanted a job and didn't have one? What months were they?" The person was counted as "unemployed" and therefore in the labor force for each month mentioned.

Many Inupiat adults did not list every month they were not employed as a month they wanted work. Possibly adults forgot to mention months considerably earlier in the year when they wanted work. However, over half the adults interviewed also stated that they preferred work schedules other than full-time, year-round work. Therefore, we classified adults who worked at some point during the year but who did not state that they wanted work in a particular month as "temporarily withdrawn" from the labor force.

In sum, the following system of labor force classification was developed to represent the wage work patterns common among North Slope Inupiat more accurately than national labor

force definitions, while still maintaining useful comparability with national concepts and statistical patterns. This classification system slightly expands the definition of "unemployment" and distinguishes between two major categories of individuals who are out of the labor force.

Definitions of Monthly Labor Force Status of North Slope Inupiat

In the Labor Force

- (a) *Employed*: An individual who held a paying job during at least two weeks of the month.
- (b) *Unemployed*: An individual who did not hold a paying job during the month, but wanted wage work that month.

Out of the Labor Force

- (a) *Intermittent Worker*: An individual who held a paying job at some point during the year, but who neither held a paying job nor wanted wage work during the month.
- (b) *Non-Wage Earner*: An individual who neither worked at a paying job nor wanted wage work during the year.

NORTH SLOPE RESEARCH OVERVIEW

This section focuses specifically on the response of Inupiat to the employment opportunities arising indirectly from energy development. A more general account of the effects of energy development on North Slope Inupiat income levels, subsistence activities, alcoholism, traumatic deaths, and other social problems may be found in Kruse, Kleinfeld and Travis (1982). In addition, a comprehensive statistical presentation of results is available (Kruse et al. 1981) as are detailed separate monographs on employment (Kleinfeld et al. 1981), subsistence (Kruse 1981), social problems (Travis 1981), and institutional development (McBeath 1981). This study was supported by the National Science Foundation's "Man in the Arctic Program," a six year project designed to examine the social and economic effects of Alaskan oil development.

THE NORTH SLOPE BOROUGH'S LOCAL HIRE PROGRAM

The discovery of oil at Prudhoe Bay in 1968 led to massive investments in oil production, camp construction, and transportation facilities. During the peak 1975 construction period, employment at Prudhoe Bay exceeded 6000 and employment has averaged over 3000 each year

since then. The total number of jobs generated at Prudhoe Bay is comparable to the total Inupiat population (about 4000 individuals, of whom somewhat over half are adults).

Despite this employment potential, actual Inupiat employment at Prudhoe Bay has not been large. Between 1970 and 1977, the oil companies employed only 14% of North Slope Inupiat adults. Of these, only 8% worked for longer than 12 weeks.

The Inupiat have been able, however, to capture large sums of oil-related wealth through the formation of an Inupiat-controlled regional government. Following extended litigation, Native leaders succeeded in establishing the North Slope Borough, and its property taxing authority, in 1972. The North Slope Borough encompasses a large regional center (Barrow), seven smaller Inupiat villages, the Prudhoe Bay Oil complex, and other major potential energy resources. Annual revenues grew from less than a million dollars in FY 1973 to about \$57 million in 1979 (McBeath 1981).

The Borough launched a \$511 million Capital Improvements Program (CIP) to improve housing, educational facilities, roads, utilities, and sanitation on the North Slope. Property taxes paid by North Slope oil producers will pay for virtually all these projects. The CIP was established in large part to raise the standard of public services available to North Slope Inupiat to the level enjoyed by urban Alaskans. However, another important CIP goal was to provide local employment for the Inupiat population.

"Maximum local hire" was a central consideration in Borough construction contracting and long-term planning. The Borough contracted with outside firms to manage construction projects, but the Borough hired local residents to do the actual construction work. The Borough government was willing to absorb substantial cost overruns partly resulting from the use of local labor rather than an experienced outside work force. "I wouldn't say the cost increase was caused by mismanagement on the part of [construction firm building Borough housing,]" Borough Mayor Eben Hopson stated in 1976, "but by the Borough's policy of hiring local labor, which is to aid full employment" (Brown 1976).

By 1977, the North Slope Borough was the largest employer of the local Inupiat population. Almost half of the jobs held by Inupiat adults came from the Borough's government operations, construction projects, and school district. Borough jobs included a wide range of professional, managerial, clerical, crafts, and unskilled positions. To minimize conflicts between wage work and subsistence, the Borough (as well as another major Inupiat employer, the Arctic Slope Regional Corporation) had a policy of granting leaves of absence for subsistence

activities. During the 1977 whaling season, for example, Borough operations virtually came to a halt as workers participated in whaling activities. Workers irregularly absent from work for subsistence or other reasons were usually re-hired.

Borough jobs paid high wages. Indeed, Borough construction wages matched the pay scales established during the building of the Trans-Alaska Pipeline. The average weekly wage of North Slope Inupiat adults in 1977 was almost \$500 per week and about 25% had weekly paychecks of \$800 or more. Yet, unlike high paying pipeline work, Borough construction jobs did not require workers to leave home and cope with prejudiced co-workers or an unfamiliar social environment. Over 90% of all the jobs North Slope Inupiat adults held during 1977 were in their home villages.

In terms of pay levels, local availability, comfortable surroundings, and adaptation to subsistence pursuits, work opportunities on the North Slope tended to be "good" jobs. Opportunities for advancement were also available. The Borough initiated on-the-job training programs and attempted to establish a local Inupiat university. In our household survey concerning community conditions, the majority of Inupiat residents (68%) indeed viewed large numbers of "good jobs" as available to them (Kruse et al. 1981). Those residents who did not view the employment situation favorably lived primarily in villages without Borough CIP projects at the time of the survey.

NORTH SLOPE INUPIAT LABOR FORCE PATTERNS COMPARED TO NATIONAL NORMS

Compared to national patterns, substantial differences occurred in Inupiat male and female responses to North Slope job opportunities. Surprisingly, Inupiat women participated in the labor force almost as much as women nationally. In 1977, Inupiat women had an annual labor force participation rate of 52% compared to a national female labor force participation rate of 61%. In the regional center, where job opportunities were more abundant, the Inupiat female labor force participation rate reached 62%. Those Inupiat women who did not choose to work in the wage economy tended to be a group of older women from the smaller villages who did not speak English during the interview. However, village women who spoke English during the interview were in the labor force an average of 6.7 months, about as much as women from the regional center, who averaged 7.3 months of labor force participation.

Only about 26% of Inupiat women did not work for wages in 1977. As with women nationally, the major reason (84%) Inupiat women gave for

not working outside the home was family pressure and responsibility. As one explained, "My husband doesn't want me to work—just take care of the kids. I've been wanting to go to work but he won't let me."

In contrast to Inupiat women, the labor force participation of Inupiat men in the prime working ages differed substantially from national patterns. While an annual average of 91% of U.S. men aged 18-54 are in the labor force, the annual average labor force participation of North Slope Inupiat men in this age group was 58%, less than two-thirds the national average. Inupiat men in the regional center participated in the labor force only somewhat more (62%) than men living in the villages (53%).

This pattern did not occur because large numbers of Inupiat men chose not to work at all in the wage economy. Very few Inupiat men (10%) were non-wage earners. The largest proportion (41%) of these stated that health problems prevented them from working, while another 34% reported that they were laid off or could not find work. Rather, the major reasons for the comparatively low rate of Inupiat male labor force participation was that about half of Inupiat men in 1977 participated in the cash economy intermittently. During 1977, on the average, somewhat less than a third of the Inupiat male workers were temporarily withdrawn from the labor force (Table 1).

TABLE 1. ANNUAL AVERAGE LABOR FORCE PARTICIPATION OF NORTH SLOPE INUPIAT MALES AND FEMALES, 18-54, IN 1977.

	MALES	FEMALES
IN LABOR FORCE		
Employed	46%	44%
Unemployed, wanted work	<u>12</u>	<u>8</u>
Total	58%	52%
NOT IN LABOR FORCE		
Intermittent workers	32	22
Non-wage earners	<u>10</u>	<u>26</u>
Total	42%	48%
Number of Respondents	(129)	(109)

SOURCE: ISER North Slope Survey, 1977.

*BASIS OF NORTH SLOPE INUPIAT
MALE PATTERN OF LABOR FORCE
PARTICIPATION*

There are two reasons for the comparatively low rate of Inupiat male labor force participation in the wage economy. The most important is economic. Despite the North Slope Borough's efforts to provide "full" employment, there was a lack of job opportunities during certain seasons and in certain villages. The second is the personal preference of about half the Inupiat male population for an intermittent work cycle. The effects of both these factors were evident in 1977, when a summer job boom followed a winter of poor job opportunities.

Due to temporary financing difficulties in the winter of 1976-1977, the Borough cut back CIP construction. Intensive construction work resumed in the summer of 1977. This increase in job opportunities between the winter and summer resulted in a large increase in Inupiat male labor force participation. While only 47% of Inupiat men participated in the labor force in November 1976, 74% of Inupiat men were in the labor force in September 1977.

However, even during the summer months of abundant, high paying jobs, Inupiat male labor force participation still remained well below national norms. In the regional center during the intense 1977 summer construction season, for example, labor force participation peaked at 76% of 18-54 year old Inupiat men.

When asked about their work schedule preferences, slightly over half of Inupiat men said that they preferred to work in the wage economy only part of the year (Table 2). The high paying blue collar construction work available on the North Slope provided men with this job flexibility. Interestingly, about the same proportion of Inupiat women also preferred part-year work. However, Inupiat women primarily held white collar jobs requiring conventional work schedules. While 60% of Inupiat female workers were employed on a year-round basis, only 39% of Inupiat male workers were employed year-round.

The preference of many Inupiat men for part-year work does not appear to be changing in the younger generation (Table 2). In a survey of North Slope high school students, more than half of the males also preferred part-year work schedules (Kleinfeld and Kruse 1977). In contrast, Inupiat female high school students, especially in the villages, were significantly more likely than male students to want to work year-round.

The dominant explanation in the research literature for the intermittent participation of northern men in the wage economy is desire to participate in subsistence activities. The time requirement for wage work is thought to conflict with the time required for hunting. Our analyses

of the way North Slope Inupiat men allocated their time in the subsistence and wage economy suggest that this explanation requires modification. Time conflicts between hunting and wage work may indeed explain withdrawal from wage work in some situations, for example, when the work is located outside the region or when employers do not give subsistence leave. As one young Inupiat man described why he had quit his pipeline job, "I worked until April '76. It was whaling time and I came home. I told them they didn't have enough dollars to keep me working." The North Slope Borough economy, however, provided local jobs and major employers granted subsistence leave. When asked why they had left their jobs, only 4% of Inupiat men said they quit work to hunt, and they were all 18-24 year olds. Moreover, we found no relationships in our survey analyses between withdrawing from wage work and subsequently higher participation in subsistence activities.

Carrying out a high level of subsistence activities does not necessarily require long periods away from wage work. Modern hunting technology—snowmachines, rifles, outboard motors, and CB radios—has greatly reduced the time requirements. No longer must large amounts of time be spent traveling to good hunting areas or in the painstaking construction and repair of equipment. Subsistence activities can be actively pursued on weekends, after work, and on vacations and leave time. Indeed, half or more of the North Slope Inupiat adults surveyed participated in central subsistence activities on this part-time basis.

North Slope Inupiat men who work in the wage economy nonetheless maintain high levels of subsistence activity. Indeed, Inupiat men who worked in the wage economy most of the year and those who worked shorter time periods differed very little in their level of subsistence activities, and none of these differences reached statistical significance (Table 3). Among Inupiat men who worked 9-12 months per year in the wage economy, 52% maintained medium to high levels of subsistence effort. Among men who worked only 1-4 months, 45% maintained similarly high levels of subsistence activities.

In interpreting these patterns, it is important to keep in mind that the measure of subsistence activity used in the survey was crude. The interview asked if the person participated in each subsistence activity and whether or not that participation was "most of the time." The interview did not ask, for example, how many days or hours the person spent in the activity. Nonetheless, these results raise questions about the common assumption that a time conflict between wage work and subsistence is the central explanation for intermittent wage work patterns.

If time conflicts between wage work and subsistence are not the central explanation, what

TABLE 2. WAGE WORK PREFERENCES OF NORTH SLOPE INUPIAT ADULTS, 18-54, AND NORTH SLOPE INUPIAT HIGH SCHOOL STUDENTS, BY RESIDENCE AND SEX: 1977.

PREFERENCES	RESIDENCE					
	Barrow		Villages		Total	
	Males	Females	Males	Females	Males	Females
NORTH SLOPE ADULTS						
Year-Round Job	28%	44%	48%	45%	42%	45%
Part of Year Job	72	56	48	49	56	52
No Job	--	--	4	6	2	3
	100%	100%	100%	100%	100%	100%
Respondents	(36)	(34)	(77)	(49)	(113)	(83)
NORTH SLOPE HIGH SCHOOL STUDENTS						
Year-Round Job	46%	67%	18%*	50%	31%*	59%
Part of Year Job	54	33	82	50	69	41
No Job	--	--	--	--	--	--
	100%	100%	100%	100%	100%	100%
Respondents	(35)	(51)	(40)	(48)	(75)	(99)

*Significant male and female differences at the $p < 0.01$ level.

SOURCES: ISER North Slope High School Survey, 1977; ISER North Slope Survey, 1977.

else might be important? One possibility is the historical experience of Inupiat men in the wage economy, the wage work patterns that have become customary on the North Slope. Wage work patterns of North Slope Inupiat men from the turn of the century onward reinforced the intermittent work rhythms of the traditional hunting economy. During the commercial whaling economy (c. 1854-1906), whalers competed strenuously for the labor of Inupiat crew members, particularly skilled harpooners (Sonnenfeld 1957). For a six week's whaling season, the Inupiat crew and their families were supported through the remainder of the year by provisions of food, clothing, and housing.

Inupiat men's first widespread experience with wage work unrelated to hunting and trapping occurred through the Department of the Navy's oil exploration program in Naval (National) Petroleum Reserve #4 between 1946 and 1953 (Sonnenfeld 1957). Barrow Inupiat petitioned for construction employment, and the Navy agreed that its civilian contractor, Arctic Construction (ARCON), would employ local labor. Inupiat men received union wages with time and a half for overtime. The work required a seven-day, nine-hour time schedule, and layoffs occurred frequently. The majority of Inupiat men worked 25 months out of the possible

87-month work period (Sonnenfeld 1957).

The end of ARCON brought a period of severe unemployment, but Defense and Early Warning (DEW) Line construction began within a year. In his study of DEW-Line employment at Kaktovik, Chance (1966) found a pattern similar to ARCON employment—high demand for Inupiat labor, high wages, desire on the part of the Inupiat to participate in wage work, and a successful work adaptation combined with some intermittent work patterns. In the late 1960s, a series of uncoordinated government construction projects (schools, water supply improvements, electrical power and airport improvements, a gas distribution system, etc.) continued the boom and bust cycle (Rice and Saroff 1964). Given these historical patterns, intermittent work at high paying jobs may have become a central adaptation of many Inupiat men to the wage economy. The current North Slope economy with its high paying, intermittent construction work is continuing this socialization experience.

Perhaps the better question is not "why do many Inupiat men prefer part-year work?" but "why would many Inupiat men want to work year-round?" Unless men are married and supporting a family (an important factor discussed later), economic pressures to work year-round

TABLE 3. ANNUAL EFFORT NORTH SLOPE INUPIAT, 18-54, SPENT ON SUBSISTENCE BY MONTHS WORKED FOR WAGES AND BY SEX: 1977*.

ANNUAL EFFORT ON SUBSISTENCE	MONTHS WORKED FOR WAGES				TOTAL
	0	1-4	5-8	9-12	
MALES					
None	29%	25%	17%	20%	23%
Low	13	30	38	28	28
Medium	36	20	16	32	26
High	<u>22</u>	<u>25</u>	<u>29</u>	<u>20</u>	<u>23</u>
	100%	100%	100%	100%	100%
Average Annual Effort Index	5.3	4.9	5.5	4.9	5.2
Number of Respondents	(24)	(41)	(26)	(39)	(130)
FEMALES					
None	39%	46%	41%	34%	39%
Low	28	50	40	38	36
Medium	22	4	19	10	14
High	<u>11</u>	<u>-</u>	<u>-</u>	<u>18</u>	<u>11</u>
	100%	100%	100%	100%	100%
Average Annual Effort Index	3.5	1.0	2.4	3.6	3.1
Number of Respondents	(47)	(17)	(8)	(37)	(109)

*The subsistence index of effort was developed by adding the number of different activities individuals participated in each month and assigning a weight of "1" to participation "most of the time" that month and ".5" to participation on weekends, after work, or on vacation and leave times. Note that the "average annual effort index" does not correspond to months of effort as months worked for wages does.

SOURCE: ISER North Slope Survey, 1977.

are not necessarily strong. A teacher described the situation in one large North Slope village:

I've had 23 students graduate over the last three years. Except for two working temporary construction, the others are hanging out. Last year I placed five graduates in good jobs. They drifted out over the summer. What's the incentive to work? The kids live with their parents. They get food, clothes, some spending money.

It is not clear that social prestige or sense of identity among North Slope Inupiat has much to do with one's occupational niche, as it does among middle-class whites. Our initial exploratory interviews suggest that hunting remains psychologically more important. Young men who choose intermittent work patterns discussed their wage jobs in superficial generalities but described their hunting activities in intense

detail. Despite the shift from subsistence to cash as the economic foundation of contemporary life on the North Slope, the "professional" hunter, competent to survive in the Arctic, remains a central male character ideal. As one young man said of his brother:

He's a hunter. He's always hunting. He'd be there surviving. That guy can live on anything. He's all right. He got a fox by running after it. He only works part time when he wants to make money. He's a wise man, smart.

Two characteristics distinguished those Inupiat men who chose to spend greater amounts of time in the wage economy (Table 4). The most important was being head of a family. Pre-service vocational educational also made a difference but only for men who were heads of families. A North Slope Inupiat male who was

TABLE 4. CORRELATION OF SKILL LEVELS AND OTHER INDIVIDUAL CHARACTERISTICS TO THE LABOR FORCE PARTICIPATION OF NORTH SLOPE ESKIMO, 18-54, BY SEX:^a 1977.

CHARACTERISTICS	MALE LABOR FORCE PARTICIPATION	FEMALE LABOR FORCE PARTICIPATION
EDUCATION AND SKILLS		
English Language Preference	0.11	0.47**
Educational Level	0.20*	0.31**
Preservice Vocational Training	0.25**	0.03
Experience Working Outside Barrow	0.12*	0.28**
PERSONAL SITUATION		
Head of Household	0.19*	0.03
Marital Status	0.15*	0.06
Age Level	0.02	-0.20*
Number of Dependents	0.08	-0.16*
Number of Children Under 18	0.06	-0.19*
Availability of Transfer Payments to Household Members		
Old Age Programs	-0.06	0.02
Other Sources	-0.02	-0.15
Total Employment of Other Household Members	0.04	0.12
Living in Barrow	0.10	0.25**
BACKGROUND INFLUENCES		
Father's Influence		
Whether Father Worked Primarily at a Wage Job	0.10	0.19*
Level of Education	0.15	0.09
Ethnicity	0.05	-0.09
Mother's Influence		
Whether Mother Worked for Wages	-0.01	-0.03
Level of Education	0.19*	0.02
Ethnicity	0.10	-0.02
Grew Up in Barrow	0.07	0.18*
Respondents	(129)	(108)

^aSpearman's Rho has been used to measure association since the variable "months in labor force" is not normally distributed.

*Significant difference at the 95% level of certainty.

**Significant difference at the 99% level of certainty.

SOURCE: ISER North Slope Survey, 1977.

not a family head and had not received vocational education was in the labor force less than half a year, an average of 5.1 months. A North Slope Inupiat male who was a family head and had vocational training was in the labor force almost twice as much, an average of 9.4 months.

Our exploratory interviews suggest that family responsibilities may increase interest in obtaining wage work. One young man said:

Before I started this job, I decided to keep

it as long as I can—then I'll be doing my hunting every chance I get. One of the reasons was I got married . . .

In examining the work adaptations of urban Native men, Jones (1976) similarly found that marriage was related to more stable work histories. She suggested that marriage is important not only because it brings financial responsibilities but also because it provides an important source of emotional support to men in dealing with job stress.

TABLE 5. CHANGES IN LABOR FORCE PATTERN OF NORTH SLOPE INUPIAT ADULTS BY SEX AND YEAR: 1960, 1970, 1977*.

MARCH LABOR FORCE PARTICIPATION	Males			Females		
	1960	1970	1977	1960	1970	1977
MARCH LABOR FORCE PARTICIPATION						
In the Labor Force						
Employed	42%	51%	44%	4%	21%	45%
Unemployed, wanted work**	<u>26</u>	<u>10</u>	<u>13</u>	<u>8</u>	<u>2</u>	<u>8</u>
	68%	61%	57%	12%	23%	53%
Not in the Labor Force	32%	39%	43%	88%	77%	47%
Total Persons	(340)	(674)	(102)	(287)	(570)	(87)
ANNUAL MEDIAN WEEKS WORKED						
Employed population only	--	34	26	--	25	47
Total Persons	--	(469)	(85)	--	(172)	(53)

*Labor force participation and median weeks worked reflect changes for adults 18-64, while marital status reflects changes for Natives 18 and over. Point Hope and Kaktovik excluded to maintain comparability with census data.

**Questions measuring unemployment differed in the 1960, 1970, and 1977 surveys. The 1960 question asked if the respondent was looking for work while the 1970 question required specific job seeking activity. The 1977 question asked for months the respondent wanted work but on a retrospective basis.

SOURCE: U.S. Census, 1960, 1970; ISER North Slope Survey, 1977.

CHANGES IN NORTH SLOPE INUPIAT LABOR FORCE PARTICIPATION RATES OVER TIME

The job opportunities created by the North Slope Borough enabled increasing numbers of Inupiat women to enter the labor force. These opportunities, however, did not suddenly increase Inupiat female labor force participation but rather reinforced a long-term historical trend. In 1960, according to census information, only 12% of Inupiat women were in the labor force (Table 5). In 1970, women's labor force participation jumped to 23%. By 1977, the proportion of Inupiat women in the wage economy more than doubled again. In addition, those women who were employed tended to stay in the wage economy longer. Median weeks worked of employed Inupiat women climbed from 25 weeks in 1970 to 47 weeks in 1977.

The entrance of Inupiat women into the labor force parallels the national trend regarding female labor force participation, but it is much more extreme. Between 1960 and 1977, Inupiat female labor force participation increased more than four times. During this period, the labor force participation of rural Black women (the female population at the national level with the greatest

growth in labor force participation) increased by 50%, and the labor force participation rates of U.S. urban white women increased by 33%.

It is not clear that Inupiat male labor force participation rates have similarly increased over time. According to the census, in March 1960 about 68% of Inupiat men between 18 and 64 were in the labor force. In March 1977, the North Slope Survey indicates 57% of Inupiat men were in the labor force. Male employment in March 1977 may have been atypically low. Yet, Inupiat male labor force participation in 1977 peaked at 72% of 18-64 year old males. The 1977 peak thus differs only slightly from the 1960 March figure.

It is also of interest that the proportion of Inupiat men employed on the North Slope during the peak work season in 1977 differed very little from the peak employment level reported in the 1940s. During the height of the ARCON boom, Sonnenfeld (1957) estimated Inupiat male employment in Barrow at about 75% of the male population.

These trends suggest that Inupiat men are not showing a historical pattern of increased participation in the wage economy. There is, however, some evidence supporting the alternative pattern. In the North Slope survey,

TABLE 6. PERCEIVED CHANGES IN TIME NORTH SLOPE INUPIAT, 25-34, SPENT WORKING IN 1977 COMPARED TO 1970 BY SEX AND AGE* (ONLY WAGE EARNERS).

WORKING IN 1977	SEX		TOTAL
	Male	Female	
More	54%	58%	55%
About the Same	26	23	25
Less	20	19	20
	100%	100%	100%
Respondents	(105)	(66)	(171)

REASONS	WORKING IN 1977			
	Men		Women	
	More	Less	More	Less
More Jobs Now	58%	-	42%	-
Fewer Jobs Now	-	48	-	31
Chose Not to Work for Wages	-	-	3	8
Have Better Job	12	-	13	-
Need More Money	23	-	5	-
Personal Reasons	7	52	37	61
	100%	100%	100%	100%
Respondents	(48)	(25)	(24)	(9)

WORKING IN 1977	AGE			TOTAL
	25-34	35-44	45-54	
More	52%	44%	83%	55%
About the Same	20	28	7	20
Less	28	28	10	25
	100%	100%	100%	100%
Respondents	(71)	(39)	(23)	(133)

*The question read, "Did you spend more, less or about the same amount of time working for pay this year compared to the time you spent in 1970?" And, if more or less, "Why is that?"

SOURCE: ISER North Slope Survey, 1977.

slightly over half of the Inupiat men said they had worked more in 1977 than in 1970. Of those saying they worked more in 1977, over half explained that more jobs were now available (Table 6). However, while 54% of Inupiat men said they had worked more in 1977, 45% said they had worked about the same amount or even less. In addition, Inupiat men in the 25-34 year age range, the largest population group, may have worked more in 1977 than in 1970 because

this group included some men who were 18-24 years old seven years ago, a life-cycle period of lower labor force participation. Thus, the apparent contradiction between census trends and personal estimation may not be substantial.

In sum, measurement problems and differences between census trends and perceptions of behavior make it difficult to draw conclusions about Inupiat male rates of labor force participation. The conservative position is that

Inupiat male labor force participation has probably not risen much, if at all, between 1960 and 1977. Inupiat female labor force participation, in contrast, has dramatically increased.

WHY INUPIAT WOMEN HAVE SURGED INTO THE WORK FORCE

Economic development does not necessarily increase the labor force participation of women. Quite the contrary, in many countries, the transition from a traditional to a modern economy has reduced activity of women in paid work (Durand 1975). In some developing African nations, for example, men typically seek wage employment in mines and factories, leaving women in rural areas to tend children and work on small subsistence farms. In addition, growth of a modern commercial sector tends to hurt informal trade, a traditional sphere of African female economic activity. Colonial education systems also shut women out of the modern economic sector by neglecting the education of women in favor of preparing a small group of men for government jobs (Standing 1976). A central theme in the research literature is the deterioration economic development frequently brings to the economic position, status, and prestige of women (Boserup 1970; Tinker et al. 1976).

The effect of economic development on female labor force participation depends on a number of factors: the particular types of labor that are in demand, the educational levels of women, and cultural norms defining women's roles. Examining changes in female labor force participation over time in more than 100 countries, Durand (1975:120, 150) concludes:

As economic development progresses, the overall level of participation by females in the labor force rises in some countries, falls in others, and oscillates in still others. . . .

Whether economic development brings an increase or a decrease of opportunities for women to be employed depends to a great extent on the relative proportions of female workers employed in the fields that expand and those that contract in the process of development.

The high rate of participation of Inupiat women in the wage economy results from a number of conditions. On the labor demand side, the specific type of development that has occurred on the North Slope has brought large numbers of jobs which the majority culture has conventionally defined as women's work. Since the 1960s, government has been a steadily expanding industry, and government employs large numbers of clerical, education, health, and social service workers.

On the supply side, Inupiat women have received both the general education and vocational training that qualifies them for wage work. In the younger generation, Inupiat women's level of educational attainment parallels that of men (Kruse 1981). About a third of Inupiat women have received vocational training in para-professional programs and another 20% in clerical fields. Nor do Inupiat cultural attitudes toward women's roles seriously restrain female labor force participation as they do, for example, in Moslem countries with a tradition of female seclusion.

The difficulties of women's role in the former subsistence economy may also have intensified Inupiat women's desires to move into the modern sector. Brower (1942:106) describes the allocation of work at the turn of the century:

The old man hung all his whalebone on his wife's back, first lashing the butts so that the tips of the bone stuck out six feet on either side. Although the woman took it as a matter of course, it made me groan just to see her straining under the load. Not so their two full-grown sons. Hardly had they started when the boys hung their bone on her back as well. This left them with only their rifles to carry. Soon even these were a burden, so they piled them on their mother, too. It was a sight to remember—that loaded-down woman followed by three husky men sauntering along with their hands behind them, at peace with the universe.

In examining the response of men and women to culture change among the Blood, Cree, and rural Germans, Spindler and Spindler (1975) point out that women tend to be less conservative than men and more interested in instrumental adaptations outside the traditional system. Economic changes on the North Slope provided Inupiat women with non-traditional opportunities. However, while Inupiat women focus a large part of their economic efforts in the wage economy, their earnings help the household maintain effort and prestige in the subsistence economy. In households where Inupiat women worked more at wage jobs, other family members spent more time in subsistence and the household shared more subsistence foods with other households (Kleinfeld et al. 1981).

DIFFERENCES IN PARTICIPATION IN THE WAGE ECONOMY BETWEEN YOUNG PEOPLE AND THE OLDER GENERATION

A commonly held view is that young people, better educated and less traditional, will participate in the wage economy more than the older generation. This pattern appears to be occurring for Inupiat women (Figure 1). Among men,

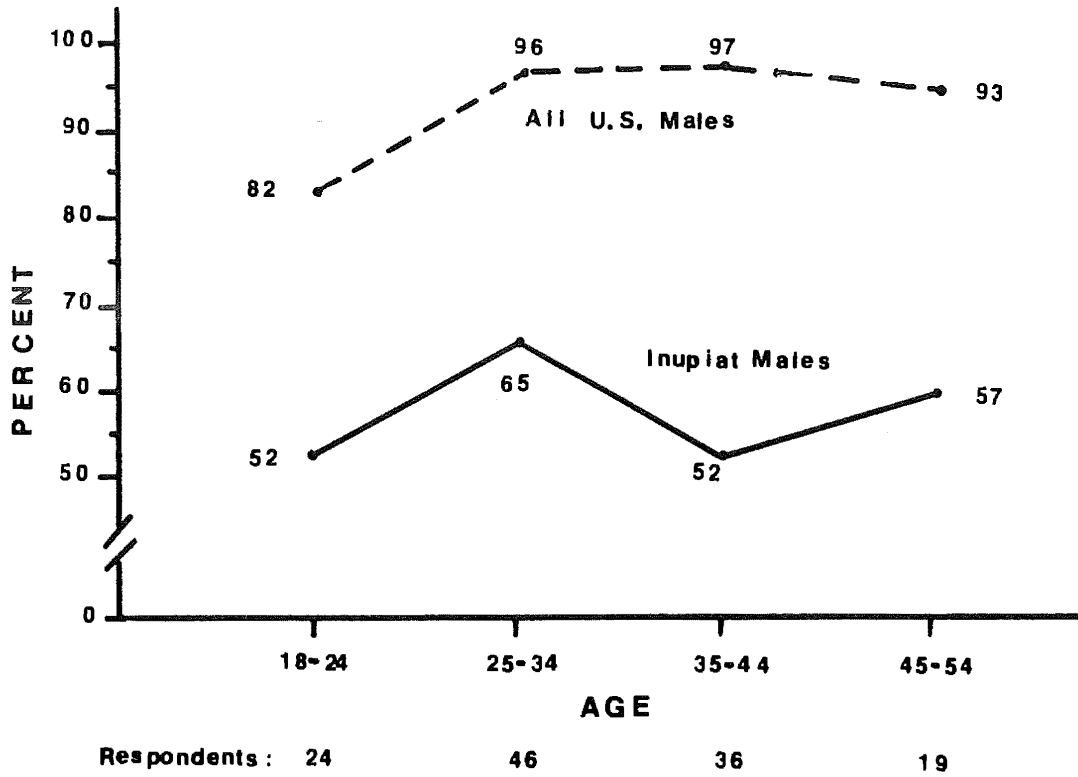


Figure 1 (a). Graphic Presentation of Labor Force Participation Rates of North Slope Inupiat Males Compared to National Norms by Age (1977).

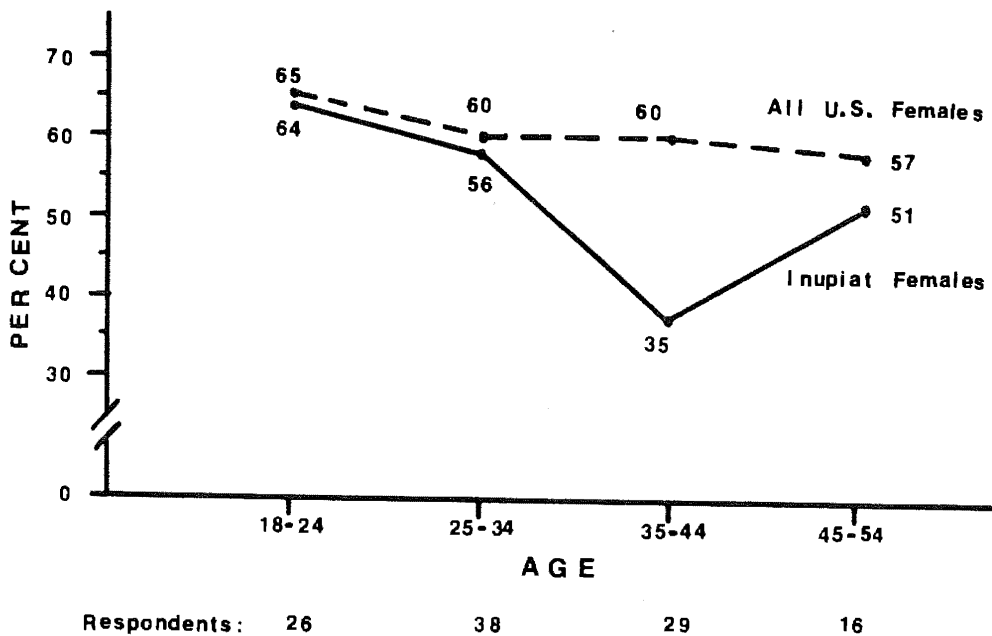


Figure 1 (b). Graphic Presentation of Labor Force Participation Rates of North Slope Inupiat Females Compared to National Norms by Age (1977).

SOURCES: U.S. Department of Labor, *Employment and Training Report of the President*, 1978; ISER North Slope Survey, 1977.

however, such an age trend is not clear. The numbers of individuals sampled in each age group, however, are small. Nonetheless, neither our attitudinal nor behavioral data suggest increasing interest in wage work among younger North Slope men.

INUPIAT MALE AND FEMALE LABOR FORCE PARTICIPATION RATES IN THE WAGE AND SUBSISTENCE ECONOMIES

The similarity of North Slope Inupiat male and female labor force participation in the wage economy is unusual. In most societies, men outnumber women in the labor force. In over 80% of all nations, close to twice as many men as women are economically active outside of the subsistence sector (United Nations International Labor Office 1977).

Inupiat men participate considerably more than

Inupiat women, however, in the subsistence economy, at least in those major subsistence activities which occur outside the household. In every age group, men exceed women in subsistence effort (Table 7). This difference is most marked in the youngest age groups. Among 18-24 year olds, 55% of the men have medium or high levels of subsistence efforts compared to 13% of the women.

In sum, despite high paying local employment opportunities, Inupiat men have not shifted to wage work to the exclusion of subsistence activities. Rather, they tend to maintain moderate levels of activity in both the subsistence and wage economies. The pattern is typical of young men as well as the older generation. In contrast, Inupiat women maintain levels of activity comparable to men in the wage economy but are less active in the subsistence economy. Young Inupiat women especially appear to be more attached to the wage economy and less active in the subsistence sector.

TABLE 7. ANNUAL EFFORT NORTH SLOPE INUPIAT ADULTS SPENT ON SUBSISTENCE BY SEX AND AGE: 1977.

ANNUAL EFFORT ON SUBSISTENCE	AGE				TOTAL
	18-24	25-34	35-44	45-54	
MALES					
None	17%	22%	25%	32%	23%
Low	28	28	30	22	28
Medium	28	23	34	16	26
High	27	27	11	30	23
	100%	100%	100%	100%	100%
Average Annual Effort*	5.7	5.6	4.5	5.8	5.4
Respondents	(24)	(50)	(37)	(19)	(130)
FEMALES					
None	41%	36%	44%	32%	39%
Low	46	35	20	49	36
Medium	8	19	23	-	14
High	5	10	13	19	11
	100%	100%	100%	100%	100%
Average Annual Effort	1.8	3.3	3.7	3.8	3.1
Number of Respondents	(26)	(38)	(29)	(16)	(109)

*Averages were computed on ungrouped data. No significant differences were found by age group.

SOURCE: ISER North Slope Survey, 1977.

TABLE 8. OCCUPATIONAL CHANGE* AMONG NORTH SLOPE INUPIAT MALES AND FEMALES, 18-64, IN 1970 AND 1977.

	MALES		FEMALES	
	1970	1977	1970	1977
TOTAL WHITE COLLAR	(25%)	(19%)	(68%)	(75%)
Prof. - Mgr.	14	12	15	17
Paraprofessional	2	1	24	26
Clerical-Sales	9	6	29	32
TOTAL BLUE COLLAR	(75%)	(81%)	(32%)	(25%)
Trades	20	29	-	-
Operations	15	14	4	4
Laborers	28	31	1	1
Service	12	7	27	20
	100%	100%	100%	100%
Number of Respondents	(83)	(110)	(43)	(60)

*Based on longest job held.

SOURCE: ISER North Slope Survey, 1977.

OCCUPATIONAL MOBILITY AFTER THE FORMATION OF THE NORTH SLOPE BOROUGH

The North Slope Borough created large numbers of diverse jobs, initiated strong Native hire policies, and attempted to provide some educational opportunities through a local Inupiat University and other job training programs. The time period between 1970 and 1977 is quite short to assess effects of these policies on occupational mobility. However, the survey did ask respondents for their major occupation in 1970 as well as in 1977 to determine if any change had occurred. Occupational comparisons showed no statistically significant increase in skilled work or in professional, technical, and managerial occupations for either men or women (Table 8).

Major differences do occur, however, in the types of occupations Inupiat men and women hold. Most Inupiat men (81%) in 1977 were concentrated in blue collar work with almost equal proportions in skilled trades (29%) and in unskilled labor (31%). Inupiat women, in contrast, were concentrated in white collar work. If paraprofessional occupations are viewed as white collar jobs (justified in our view by the skill level required in isolated cross-cultural con-

texts), 75% of Inupiat women were white collar workers.

In considering the potential for Inupiat occupational mobility over a longer period of time, it is important to examine the economic incentive structure created by the North Slope Borough. Inupiat men have the option of high paid construction work as unskilled laborers. On an hourly basis, these jobs pay as much as or more than professional and managerial positions. Inupiat women, in contrast, are concentrated in white collar work where pay scales for professional and managerial work far exceed pay for clerical and paraprofessional positions.

In the 1977 North Slope economy, Inupiat women, much more than Inupiat men, had financial incentives for educational achievement. Inupiat women who obtained a high school education earned over one and a half times the weekly wages of women who were not high school graduates (Table 9). For men, completing high school made no difference to weekly wages, given the high pay levels of unskilled construction work. Even in terms of annual earnings, completing high school resulted in only a 27% increase in men's earnings (and these high school graduates worked additional months). If unemployment compensation is taken into account, the income difference between high school graduates and others would decline further. Women with a high school education, in contrast, earned over twice as much annually as women who were not high school graduates.

These differences in economic incentives may have an important influence on male and female levels of educational motivation. Among Inupiat adults over 25, 8% of the women had a four-year baccalaureate degree compared to only 1% of the men. In the youngest age group (18-24 years), a trend appeared for the women to have slightly higher rates of educational achievement, more employment experience, and more experience either in school or working outside the North Slope (Kruse et al. 1981). In interpreting this trend, it is important to keep in mind the small sample and also the possibility of age differences when men and women organize their adult lives. However, what is economically rational for a young man growing up on the North Slope (but not for a young woman) is to minimize school, and work construction.

Jobs themselves also function as "schools," teaching not only information and skills but also attitudes and values. In a study of Inuit male and female work roles in Canada, McElroy (1977) points out that the white collar jobs held by Inuit women lead to substantially more nonformal education than the blue collar jobs held by Inuit men. Women's jobs tended to place them in close working relationships with professional supervisors who viewed their role explicitly as training Inuit employees. Construction contractors, who employed Inuit men, in contrast,

TABLE 9. EFFECT OF EDUCATION ON WEEKLY AND ANNUAL WAGES OF NORTH SLOPE INUPIAT, 18-54, BY SEX: 1977.

EFFECTS OF EDUCATION	Median Wage	Number of Respondents	Mann-Whitney Statistic	Level of Significance
WEEKLY WAGE				
Females				
Less than High School	\$ 190	(27)	224	0.05
High School or Above	300	(23)		
Males				
Less than High School	499	(35)	632	n.s.
High School or Above	479	(38)		
ANNUAL WAGE				
Females				
Less than High School	7,606	(29)	250	0.025
High School or Above	15,574	(25)		
Males				
Less than High School	12,587	(36)	586	0.025
High School or Above	15,932	(44)		

SOURCE: ISER North Slope Survey, 1977.

saw their role as "just getting a job done, not trying to educate the Eskimos" (McElroy 1977: 340). Similar processes may be occurring on the North Slope. Half of the North Slope leaders interviewed in a study of North Slope government were dissatisfied with on-the-job training Inupiat construction workers received (McBeath 1981). They saw the CIP's construction management system as failing to provide work skills that would make Native workers employable in other jobs. There was more satisfaction with the on-the-job training occurring in white collar managerial and technical work, where Inupiat women are concentrated.

An ideal of the North Slope Borough is to increase self-sufficiency by raising educational levels and by reducing dependence on imported professionals and other skilled workers (North Slope Borough 1980). The current economic incentive structure and nonformal job training patterns are not supporting the objective, at least for men. There may be an intrinsic conflict between two goals of the North Slope Borough—to use oil revenues to distribute high paying jobs to the general population, and to increase educational achievement and skill development.

CONCLUSION

The availability of local, high paying jobs adapted in some respects to Inupiat life styles has had different effects on North Slope men and women. As jobs became available, Inupiat women surged into the labor force, continuing a historical process of increased female labor force participation. The labor force participation rate of Inupiat women, particularly young women, is close to the national rate of female labor force participation.

In contrast, Inupiat men are adapting in culturally different ways to the wage economy. Across all age groups, Inupiat male labor force participation rates in the wage economy are substantially lower than national norms. Inupiat men, however, are also active in the subsistence economy, and young men participate in major subsistence activities as much as the older generation. Despite opportunities for local high paying wage work, Inupiat men are maintaining a bicultural pattern of activity in the wage and subsistence economies.

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