

THE HUMAN FACTOR IN ALASKA'S ECONOMIC DEVELOPMENT

George W. Rogers
Research Professor of Economics
University of Alaska
College, Alaska

Paper presented at Fourteenth
Alaska Science Conference
August 27-30, 1963
Anchorage, Alaska

THE HUMAN FACTOR IN ALASKA'S ECONOMIC DEVELOPMENT

By George W. Rogers
University of Alaska

Given world and national trends and given Alaska's known and potential natural resource base, the future of our State will be one of continuing and accelerating industrial development. A number of attempts have been made to project this future in terms of specific industrial developments and in terms of resulting specific amounts of employment and population increases. The most recent of these, the market study for Rampart power, predicts a total of 46,000 new jobs in basic and supporting employment directly and indirectly from new industrial development plus possibly another 17,500 jobs in both categories directly and indirectly from primary aluminum processing.¹ The economic factors of natural resource potential, transportation requirements, probable costs and markets are all receiving considerable attention. As regards to the human factor of sources of labor supply, it is generally assumed that the people to fill the rather substantial number of new jobs will be available from the natural increase of the present resident population or from further in-migrations. There appears to be no critical problem. The Native Alaskans of aboriginal stock are increasing at a steadily expanding rate, the 1960 crude rate of natural increase (excess of birth over deaths) was 38.4, a rate which is only approached in certain Latin American nations.² In the past the non-Native population levels have fluctuated through cycles of in or out migration in response to changes in the levels of general economic activities.

The purpose of this paper is to determine whether there is a basis for assuming that the human factors involved in Alaska's anticipated development will make adjustments and appropriate response in a automatic manner. This will be done through a brief review of the experience of the southeastern Alaska region between the census dates of 1950 and 1960. During this period two major pulp mills were constructed and commenced operations with the resulting shift in the nature of the economic base and the creation of many new job opportunities. The future development of the State of Alaska as a whole will take place in a similar manner with the introduction at various points of time of certain new major industrial units. The manner in which the people of southeastern Alaska responded and adjusted to the major industrial developments which took place in that region, therefore, could serve as a indication of the nature of the response and the problems which might be anticipated elsewhere in Alaska.

The nature of the regions's earlier development will be briefly discussed as an introduction to an evaluation of the experinece of the 1950's.

The year 1878 stands as an important starting point in the economic development of southeast Alaska. In that year the first salmon canneries in Alaska were erected at Klawock and Sitka and within eight years canneries were operating in all areas of the region. The size of the canned salmon pack continued to expand rapidly, the peak being reached with the 1941 season. The year 1878 was also the year in which the first

full-fledged gold mining camp in Alaska came into existence at Windham Bay. Discoveries extended throughout the region and production continued until World War II brought the closing of the last of the large operations in 1944. Gold values reported since then have been primarily from old mill cleanups. Significant values were realized from other natural resources, but canned salmon and gold were the economic life-blood of southeast Alaska from the 1880's until the early 1950's.

The Native people accomodated themselves readily to the development of commercial fisheries. The labor skills required were merely adaptations of an already established aboriginal skill --the primitive fisherman merely accomodating to enlargement of the vessels from which he operated and the addition of internal combustion engines as a means of propulsion. The women adapted their traditional hand-skills to the requirements of the salmon cannery, the painstaking hand work needed in picking and cleaning shell-fish, etc. Beyond some adaptations of technical skills, the industrialization of fisheries required little change in the traditional ways of life. Tied to the harvest of regularly occuring fish runs of limited duration, the seasonal rythms of life were little changed. Because aboriginal settlements were located for ease of exploitation of the same basic resources, there were no dislocations or relocations of population required within the region. During the period 1929 through 1950, the participation of the Native people in the commercial fisheries was almost constant in absolute and relative terms. More than ninety percent of those of normal working age participated in some phase of fishing or processing each season (refer to Table 1).

TABLE 1
PEAK SEASONAL PARTICIPATION
IN FISHERIES BY INDIGENOUS PERSONS, 1929-1950

	1929	1939	1950
1. Total persons engaged in fisheries	13,216	12,916	14,094
2. Total indigenous person engaged in fisheries	3,200	3,613	3,621
2 as % of 1	24.2	28.0	25.7
3. Total indigenous persons over 15 years and over	3,504	3,640	4,000*
4. Participation rate $\frac{2}{3}$	91.3	99.3	90.5

* Estimated by applying non-white age distribution to total indigenous population reported by census.

SOURCE: George W. Rogers, Alaska in Transition (Baltimore: 1960) p. 149, computed from reports of U.S. Bureau of Fisheries, U.S. Fish & Wildlife Service and U.S. Bureau of the Census.

Since mid-century the region's economy has been undergoing basic changes. Following the closing of the last lode gold mining operation in 1944, except for a brief export of significant values of uranium in the late nineteen fifties, the minerals industry of the region has been virtually non-existent. Fisheries products have experienced almost continuous decline, falling from the 1941 high total output of 255,590,000 pounds prepared for market to the 1955 low of 86,580,177 pounds. The cause of this decline has been simply over-exploitation and depletion of the salmon resources. Although heartening rehabilitation progress has been made since 1955, production can never recover its past high levels.³

But the region is not limited exclusively to marine resources. The major land cover is that of the dense coastal rain forests of the Pacific Northwest, predominantly western hemlock and Sitka spruce. Approximately 73% of the region's land area is within the Tongass National Forest which contains an estimated 146 billion board feet of commercial timber, 92 billion board feet of which is economically accessible under present conditions. Because of the marine character of the region, its forests fringe the many miles of shoreline of islands and indented mainland, about three-quarters of the timber being within two and a half miles of tidewater and the rest rarely extending inland more than four or five miles and reaching altitudes of no greater than 1,500 feet. The waterways of the region provide a ready-made system of trunk or main "roads" and the feasibility of logging much of the timber directly into tidewater reduces the need for feeder roads.

Despite the extent and generally good commercial quality of these forest resources and the natural means provided for their economic harvesting and movement to mills, until 1954 they had been subjected only to a modest harvest to provide special cuttings of high-grade spruce logs for export during World War I and II and small annual harvest primarily for local timber requirements. In 1954 a mill initially producing 300 tons daily (later increased to 525 tons) of high alpha pulp for use in rayon and cellulose acetate production went into operation at Ketchikan and late in 1959 a similar mill at Sitka started with an initial capacity of 390 tons per day for export to Japan. The average annual timber cut in the Tongass National Forest jumped dramatically from an average of 55,823 thousand board feet for the five-year period 1949-1953 to 189,425 thousand board feet for 1954-58 and 317,431 thousand board feet for 1959-61.⁴

The generalized impact of these developments and shifts in the basic economy were registered in the composition of total natural resource products and employment patterns. A comparison of the value of products from natural resources in the five years immediately preceeding the launching of the pulp industry revealed that 86.7% was accounted for by commercial fisheries (refer to Table 2). This is representative of the composition of earlier periods with a modest shift toward "land resources" before 1944 when gold was being mined. With the addition of one pulp mill, the relative importance of marine resources dropped to 53.3% for the period 1954-58 and to 43.3 % for 1959-61, while the importance of "land resources" rose from 13.3% to 46.7% and 56.7% of the value of all natural resource products for the same periods.

Although generated within the region, much of this value went outside in the form of profits and other payments to absentee business interests and wages to non-resident seasonal workers. However, the changes did have important and beneficial impacts on personal income received by residents (refer to Table 3).⁵ Comparing the data for the calendar years 1950, 1955 and 1960, not only was the relative distribution between various forms of income payment changed, but both the total and per capita amounts were increased. The region was more prosperous and its residents, on the average, more affluent.

TABLE 2.

VALUE OF NATURAL RESOURCE PRODUCTS, 1949-1961
(Value at highest level of processing or harvesting within the region)

	Estimated Average Annual Values For:					
	Calendar Years 1949-1953		Calendar Years 1954-1958		Calendar Years 1959-1961	
	Thous. of dollars	%	Thous. of dollars	%	Thous. of dollars	%
<u>Marine Resources</u>						
Comm. fisheries (wholesale value)*	40,307	86.7	32,043	53.3	33,473	43.3
<u>Land Resources</u>						
Forest products (value f.o.b. mill)	4,300	9.3	25,200	41.9	41,400	53.6
Wildlife (furs and subsistence values)**	1,400	3.0	1,300	2.2	1,000	1.3
Minerals industries sand gravel, building stone	65	0.1	586	1.0	201	0.3
	144	0.3	659	1.1	851	1.1
Agriculture (whole- sale, commercial & home use values)	<u>300</u>	<u>0.6</u>	<u>308</u>	<u>0.5</u>	<u>300</u>	<u>0.4</u>
SUB TOTAL	6,209	13.3	28,053	46.7	43,752	56.7
TOTAL ALL PRODUCTS	<u>46,516</u>	<u>100.0</u>	<u>60,096</u>	<u>100.0</u>	<u>77,225</u>	<u>100.0</u>

*Commercial production only. Does not include personal use or sport take.

**Raw value of furs and minimum food value of estimated game take by resident hunters.

SOURCE: Computed from data in G.W. Rogers and R.A. Cooley, Alaska's Population and Economy, Vol. II, Statistical Handbook (State of Alaska, March 1962), p. 208.

TABLE 3
 PERSONAL INCOME RECEIVED
 By Residents, 1950, 1955, 1960

	Calendar Years		
	1950	1955	1960
1. Private Wage and Salary Disbursements	(Million of dollars)		
Fishing (excluding proprietors)	1.4	1.62	2.0
Fish processing	2.5	1.0	1.6
Other manufacturing (including timber and pulp)	1.3	8.8	14.1
Construction	3.0	5.3	4.0
Other industries	12.3	13.5	30.2
Sub-total	<u>20.5</u>	<u>30.2</u>	<u>51.9</u>
2. Government wage and Salary Disbursements	15.4	20.6	26.0
3. Proprietors' income, property income, misc.	<u>12.6</u>	<u>18.5</u>	<u>20.0</u>
TOTAL PERSONAL INCOME	<u>48.5</u>	<u>69.3</u>	<u>97.9</u>
Per Capita personal income (Dollars)	1,720	2,165	2,765

SOURCE: 1955 and 1960 from G.W. Rogers and R.A. Cooley, *op. cit.*, pp. 178-179. Calendar year 1950 estimated from southeast and State value of products, employment and population data using general assumptions and methods used by U.S. Office of Business Economics.

Another profound change in the region's economy has been the introduction of the first major year around industry (other than government and "distributive" industries). In the past, general development and settlement have been handicapped by the extreme seasonality and uncertainty of fishing and fish processing and the lack of off-season job opportunities. This has meant that after the brief and intense activity of the fishing season, the indigenous population has had to round out its annual support from subsistence food gathering and welfare payments. The additional labor required has been met from outside sources by a regular migrant labor force much as is done in many agricultural regions.

In the new timber-using industries, the seasonal pattern is comparatively minor, resulting from the effects of winter weather conditions upon logging activities and the regular year-end shut down of the pulp mills for major repair and rehabilitation, etc. This has required a resident labor force available on a year around basis. With the Native people already established in the Region and non-Native labor being dominantly migrating, it seemed logical that the source of this new type of labor force was to be found among the Natives. A comparison of the relative seasonality of salmon canning, forest products and other major industrial classifications can be made from employment data collected through the administration of the Alaska Employment Security insurance program which covers all firms employing one or more persons (refer to Table 4).

These are the impacts upon the economy and general employment. Now we must turn to the people involved, and this will be done in very broad terms of the impact upon the indigenous and the non-indigenous populations

TABLE 4

SEASONAL PATTERN OF PRIVATE EMPLOYMENT
COVERED BY STATE UNEMPLOYMENT INSURANCE - 1960

	Canned & cured Seafood	Forest Products	All other ¹ Commodity- producing Industries	Distri- ² butive Indus- tries
	(12 month average = 100.0)			
January	48.9	73.7	68.7	90.3
February	41.4	86.5	73.6	90.4
March	31.1	98.3	76.3	95.1
April	45.9	112.9	85.2	90.5
May	99.4	119.3	110.3	97.6
June	171.2	119.9	122.4	108.1
July	243.2	112.4	129.0	106.4
August	244.1	109.3	132.6	113.9
September	118.7	103.3	124.3	106.4
October	51.8	100.1	109.5	101.1
November	51.2	93.0	89.0	99.6
December	52.5	70.5	79.6	100.4

¹ Mining, construction, other manufacturing.

² Transportation, communications, utilities, wholesale and retail trade, finance, insurance, real estate, services.

SOURCE: G.W. Rogers and R.A. Cooley, op. cit., pp. 82, 92, 123 and 124.

The popular and official view on the expected impact upon the indigenous people of the expansion of forest products industries was stated by the Governor of Alaska before a congressional committee in 1947. "I know of no one thing that will be more beneficial to the economy of the Indian population than the development of this pulp and paper industry.....It means a new day in the Indian economy. It means that instead of being obliged to subsist for 12 months on the rather uncertain earnings of three or four months' fishing, they will have something that will keep them employed all year around, and I can think of nothing that will equal that in benefit."⁶ This conclusion appeared too obvious for further comment. Thousands of new jobs would be created just at a time when fisheries income and employment were falling at an alarming rate. All non-Indian persons concerned appeared to have no doubt that the readjustment to the new economy would be automatic, immediate and complete.

Seven years after the opening of the first pulp mill, however, the actual experience has been that there was virtually no impact upon the Indian population as a result of the introduction of the new industry and its new jobs and income. For his basic livelihood, the Indian continued to cling to fishing and fish-processing despite their depressed condition. This has called for expanded federal and state relief programs within the region. In 1953 and in 1954 the President of the United States declared that a major economic disaster existed in those areas dependent upon fishing and a program of agricultural surplus commodities distribution was instituted in addition to the more customary cash relief programs. Annually the

Alaska legislature has appropriated money for a continuing program of work relief in the villages. The only significant geographic movement of Indian population within the region away from the ancestral villages has been into Juneau and Mt. Edgecumbe, the principal sources of public assistance. An occasional Indian found employment in the mills or logging operations, of course, but these are only minor exceptions to the generalization that these people have not received the expected benefits of employment and income from the new industry.

A few statistical verifications of these observed conditions of the Native and non-Native people can be gleaned from a comparison of selected data from the 1950 and 1960 census reports. Despite the creation of a whole range of new employment opportunities, the participation rate of the normal working-age Native population actually declined between 1950 and 1960, while that of the non-Native population enjoyed a significant increase (refer to Table 5).

The economic shift within the decade of the 1950's was accompanied by a 25% increase in total population (refer to Table 6). Breaking this data into geographic area and major racial classifications, there appeared to have actually been a movement of Native population away from the two centers of new economic development at Ketchikan and Sitka. (The location of the major Bureau of Indian Affairs health and education center at Sitka introduces some abnormalities into the picture, but the generalization would appear to apply.)

Both these comparisons indicate that the new jobs must have been filled by more intensive utilization of the non-Native population and a significant immigration of additional workers from outside Alaska. The developments appear to have had virtually no impact upon the employment situation of the Native people.

TABLE 5

EMPLOYMENT STATUS
APRIL 1950 - APRIL 1960

	Persons 14 Years Old and Over	Gainfully Employed	Participate Rate
<u>April 1960</u>			
Native, total	5,408	2,015	0.373
Male	2,591	1,168	0.451
Female	2,817	847	0.301
Non-Native, total	18,271	11,663	0.638
Male	10,224	7,935	0.776
Female	8,047	3,728	0.463
<u>April 1950</u>			
Native, total	4,858	1,849	0.381
Male	2,562	1,309	0.511
Female	2,296	540	0.235
Non-Native, total	15,703	9,402	0.599
Male	9,309	6,851	0.736
Female	6,394	2,551	0.399

SOURCE: Computed from data in U.S. Bureau of Census, 1950 U.S. Census of Population, P-B51, Alaska, Tables 25 and 26; U.S. Census of Population, 1960, PC(1)-3B, Alaska, Table 28, and PC (1)-3C, Alaska, Tables 83 and 87.

TABLE 6

GEOGRAPHIC DISTRIBUTION OF
POPULATION INCREASES, 1950-1960

	Total Region	Ketchikan ¹ Area	Mount Edgcumbe	Sitka Area ² 3 Balance	All Other Areas
<u>April 1960</u>					
Native	9,242	2,778	1,435	1,402	3,627
Non-Native	<u>26,161</u>	<u>9,064</u>	<u>449</u>	<u>3,404</u>	<u>13,244</u>
Total	<u>35,403</u>	<u>11,842</u>	<u>1,884</u>	<u>4,806</u>	<u>16,871</u>
<u>April 1950</u>					
Native	7,928	2,581	718	1,447	3,182
Non-Native	<u>20,275</u>	<u>6,904</u>	<u>429</u>	<u>1,956</u>	<u>10,986</u>
Total	<u>28,203</u>	<u>9,485</u>	<u>1,147</u>	<u>3,403</u>	<u>14,168</u>
<u>Percentage Increase 1950-1960</u>					
Native	16.6	7.6	99.9	(3.1) ⁴	14.0
Non-Native	<u>29.0</u>	<u>31.3</u>	<u>4.7</u>	<u>74.0</u>	<u>20.6</u>
Total	<u>25.5</u>	<u>24.8</u>	<u>64.3</u>	<u>41.2</u>	<u>19.1</u>

¹ Ketchikan and Prince of Wales election districts.

² Sitka election district.

³ Bureau of Indian Affairs major health, boarding school and vocational training center. 1950 to 1960 increase due to expansion of programs drawing Native Alaskans from entire state.

⁴ Decrease between 1950 to 1960 may be due in part to movement of Native population from the city of Sitka to Mount Edgcumbe as facilities made available between 1950 and 1960, and in part due to different methods employed in collection of census data.

SOURCE: U.S. Bureau of the Census, U.S. Census of Population, 1960, PC(1)-3B Alaska, Tables 23, 28; census data for 1950 from unpublished census worksheets as tabulated in G.W. Rogers, Alaska in Transition, (Baltimore: 1960), pp. 358-359.

The failure of the increasingly underemployed Indian to move into the new job markets has perplexed many other Alaskans. The Indian already appeared to have made a transition from an aboriginal local-consumption-oriented economy to a modern commercial economy geared to fisheries production for overseas markets. He no longer ran naked or dressed in skin garments, but bought his clothes, food and household goods from the same sources as other Alaskans. Most of his income had long been received in the form negotiable commercial instruments or "legal tender", checks for fish sales, wages and welfare payments. He has enjoyed full citizenship rights under United States rule, is an apt politician and an active voter.

The experience of the past few years, however, has demonstrated that the difficulty and extent of the remaining transition were underestimated. The marine-based economy which developed from the late nineteenth until the mid-twentieth century required relatively minor adjustments in traditional means of securing a livelihood and no change in the seasonal rhythm of life. The now emerging economy is primarily land-based, urbanized, requires new and more specialized labor skills, for all practical purposes is almost nonseasonal, and requires a labor force accustomed to working at a set employment within specified time limits of the day throughout the year.

Not only is there a shift in the natural resource base of the economy, but the organization of economic activity has changed. This requires a whole new set of skills from the Indian wishing to make the transition from fisherman to mill operative or lumberman, plus an

entirely different attitude toward work and life. The fisherman is a man of many skills and talents, and within the rigid limits imposed by nature and economic necessity makes his own decisions as to when, where and how much he will work. As an industrial operative, the former fisherman will be required to learn one narrow set of skills intensively and be willing to submit to the discipline of working under the direction of others who will make his work decision for him. The acceptance of public welfare assistance might appear to involve no greater loss of human dignity than the acceptance of such terms.

The importation of technically qualified workers from outside the region has also had its unanticipated results. Economic feasibility studies took into consideration the higher cost of living in estimating labor costs, but did not take into account the cultural characteristics of the imported workers and the physical conditions imposed by the region. The new labor recruit has not "taken" to the sort of life offered by the region. Although there has been an increase in the number of new Alaskans, they have tended to be a very restless lot.

Only one example will be cited. The automobile is the most prized possession of the highly mobile industrial workers of the United States and together with the super-highways represents a whole way of life. The new worker brought his family car along just as naturally as he did the family, but the topographic features of the region--the many islands, mountainous terrain, breaking of the mainland portion by deep fiords, etc.--make any significant mileage of local roads costly and a fully interconnected system an impossibility. The difficulty in realizing maximum pleasure from an automobile in such country has

contributed to worker discontent and to the unexpectedly high rate of labor turnover.⁷ During a strike in 1961, the Ketchikan local of the pulp and sulfite union included in its negotiating contract a proposal that the company pay for the barging of workers' family cars to Seattle and return as part of their regularly paid vacation benefits. The agreed upon compromise provided that the company subsidize the rental of cars at Seattle and pay mileage rates beyond for workers who spend their vacations outside. This is only one of the costs of retaining outside labor recruits.⁸

Another set of human adaptations, therefore, are called for in considering the recruiting of labor from non-Native sources. This involves the adaptation of man to a new physical environment. Although the economy has shifted to the land, life within the region is still dominated by its marine nature and must be amphibious in turn. As in the case of the need of the Indian to adapt to a new social and economic environment, this will not be simple and will be costly in the long run if not recognized as a real problem.

This paper is intended as more than an academic demonstration of the 20-20 vision of hindsight. The lessons to be drawn from a more detailed study of the recent past have important implications for the realization both of the southeastern region's long-run future and that of the State as a whole. The marked shift in the natural resource base of this region accomplished over the past seven years appears to be only the entering edge of a continuing and broadening trend. In other regions of the State variations of this experience will be repeated as new major

industrial developments materialize. For practical economic reasons, quite aside from humanitarian, there is an urgent need for more widespread, intelligent and sympathetic understanding of the Native Alaskans' problems of transition. Alaska's further economic expansion will be hobbled should it be saddled with the economic burden of an increasingly unproductive and growing sector of its population. There is also need for determination of what each physical region imposes and offers in the development of a satisfying life for new immigrants. Unless it is possible to develop a citizenry adapted to each region in which development can take place, the newly established enterprises will continue to be plagued with the added cost burden of continuing high labor turnover.

References and Notes

- 1 Development and Resources Corp., The Market for Rampart Power, Committee Print, 87th Congress, 2d Session (USGPO, Washington: 1962), pp. 102-107.
- 2 G. W. Rogers, R. A. Cooley, Alaska's Population and Economy, Vol.II, (State of Alaska: March 1962) pp. 48-49.
- 3 U.S. Fish and Wildlife Service, Alaska Fishery and Fur Seal Industries: 1941, Statistical Digest No. 5 (Washington: 1943), pp. 19-21; and Alaska Fishery and Fur Seal Industries: 1955, Statistical Digest No. 40 (Washington: 1957), pp. 32-39.
- 4 G. W. Rogers and R.A. Cooley, op. cit., p. 208.
- 5 "Personal income" is defined as used by the U.S. Office of Business Economics, Department of Commerce, in its regular annual estimates for the United States and the individual states. It is the current income received by residents of the region from all sources inclusive of transfers from government and business, exclusive of transfers among persons. Included is income received by resident individuals, unincorporated businesses and non-profit institutions. Non-monetary as well as monetary income is included (i.e. value of subsistence hunting and fishing, etc.).
- 6 Committee on Agriculture, House of Representatives, 80th Congress, First Session, "Hearings on House Joint Resolution 205," May 26, June 14, July 1, 3 and 9, 1947 (Washington: 1947), p. 45.
- 7 It should be stated that these generalizations do not apply to the main part of Alaska which fits the continental expanse of space which is typical of the American tradition.
- 8 The strike and contract negotiations were fully covered in the local press. Daily Alaska Empire, September 20, 1961 summed up the settlement.