

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 86/2

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PREFACE

The present project grew out of an awareness by the Federal Field Committee that in the course of its study effort a fairly definitive economic analysis had to be made at a subregional--that is to say, less than a statewide aggregate--level. To be most useful it was seen that the study should forecast the economic future of the several regions of the state for a period roughly comparable to the time horizon of most agency plans and programs. In order to be as precise as possible, the study was cast in the typical measures of economic growth which are subject to quantification--income, employment, and investment. Therefore, to the extent governmental agencies care to tie to this analysis in shaping their Alaska activities, it should be especially helpful in policy formulation: unlike most previous Field Committee studies, it is not recommendatory in character. It also provides an important step toward a comprehensive development plan for Alaska.

Begun March 1, 1968, with funding from the Economic Development Administration of the U. S. Department of Commerce, this study is a composite product of a number of researchers and writers who performed in team fashion over a five-month period. Arlon R. Tussing was responsible for Chapters 4 and 6; Hubert J. Gellert prepared Chapters 2 and 5. Chapter 3 was the joint product of Clyde S. Courtnage, Gerald L. Allen, Thomas J. Smythe, Bradford H. Tuck, Donald E. Hazen, and myself. The chapter on Native protest and economic development was prepared by the full team; and the chapters on the public finance and science and technology aspects were my responsibility, as was the task of final editing.

Particular portions of the full study drew freely on recent publications of the Field Committee and others, as one or another study was unusually relevant to the analysis. Important in these last were George W. Rogers' *Alaska Regional Population and Employment*; Cresap, McCormick and Parget's *A Program for Increasing the Contribution of Tourism to the Alaska Economy*; and the Federal Power Commission's and Alaska Power Administration's unpublished draft studies. Federal (and some state and local agencies) provided especially valuable information inputs--these included the Forest Service, the Bureau of Commercial Fisheries, and the Department of Defense. In the private sector, a number of businesses in the forest products, oil and gas, fisheries, and transportation industries supplied helpful information in interviews and correspondence.

The analyses and conclusions are, of course, those of the authors and do not necessarily represent those of the Field Committee.

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Planning in Alaska
Anchorage, Alaska
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CHAPTER 1

INTRODUCTION

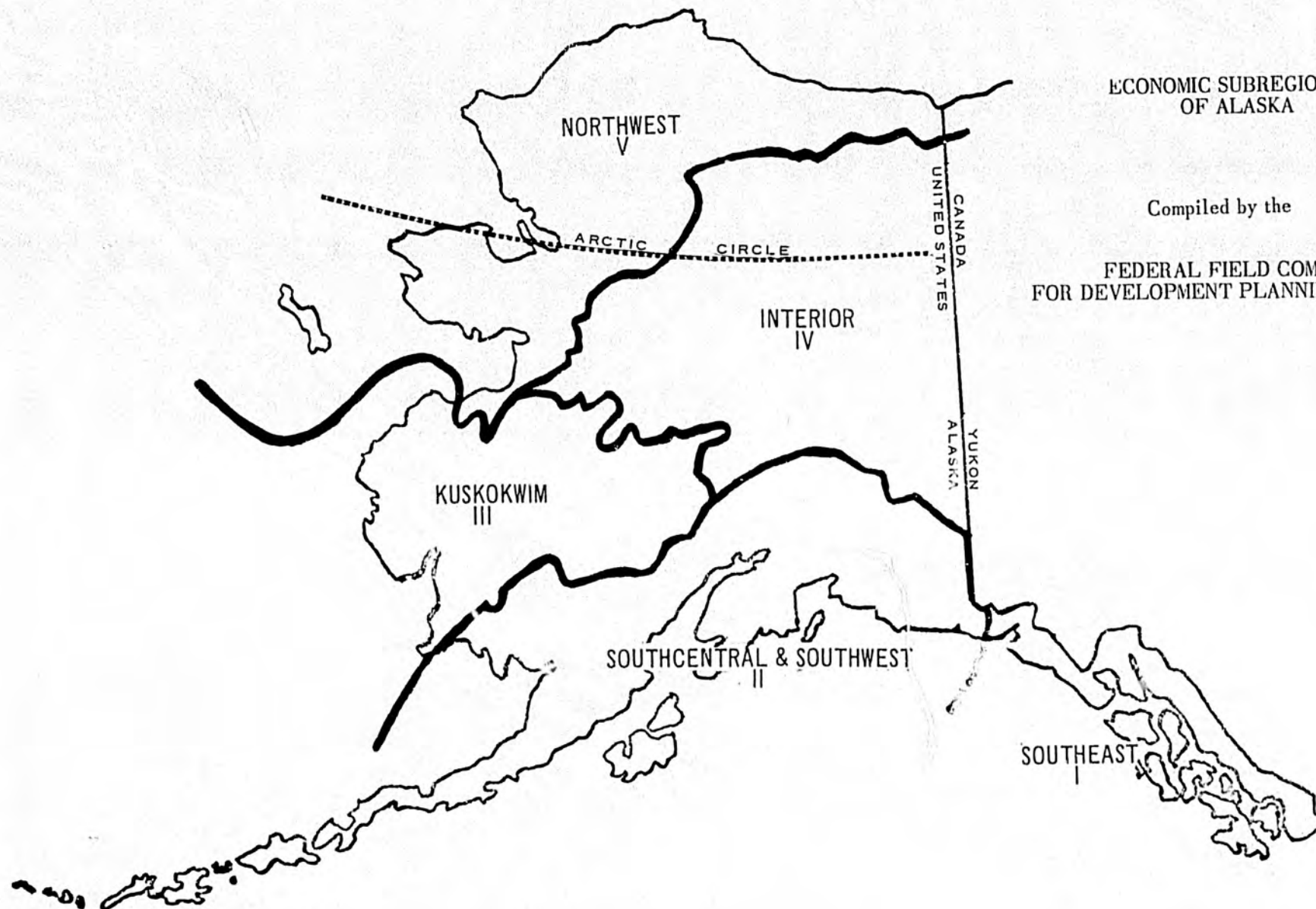
Previous studies of Alaska's economy have largely dealt with the state as a single unit organized by common goals and a single governmental body to meet the collective needs of the Alaskan people. Such an approach has a great deal of merit, but it masks the great diversity that lies within the State of Alaska.

There is, strictly speaking, not one but many economies within the state. Most Alaskans function within the framework of a money economy and engage in economic activities similar to those of an "average" U.S. citizen; but a considerable number of Alaskans spend most of their life in a subsistence economy that resembles more a way of life of the past than of the present; and, finally, a large percentage of Alaskans are employed in the realm of national defense, whose activities, while not without some economic impact, are not economic in nature. The heterogeneity that exists among the people is also present in the land, the climate, and the economic structure and institutions. The mild-climated southeastern region of the state, with its important commodity-producing industries, is linked very closely in its trading relations with Japan. The south-central region of Alaska, with Anchorage as its geographical center, acts as the economic hub for the whole state. The northernmost region of Alaska, by contrast, is an area of sparsely populated, scattered communities living in an inhospitable climate with only the most primitive surface transportation.

1. DELINEATIONS

In response to this great diversity, this study has separated the state into five geographic regions. The location of each of the regions is indicated on the map on the following page. Several delineations of subregions could be made and certainly no single division is going to be entirely satisfactory. The delineation used in this study was guided by a desire to work with regions that are approximately homogeneous with respect to social, demographic, economic, and geographic variables. The election district became the basic building block because much of the regional data for Alaska is available by election district and not otherwise available. In most cases, major economic centers in Alaska are fairly distinct. Hence, the "nodality principle" could be used in constructing a region by grouping the election districts about major economic centers. The following brief description of each region should serve to indicate why each was classed as a region.

FIGURE 1-1



ECONOMIC SUBREGIONS
OF ALASKA

Compiled by the

FEDERAL FIELD COMMITTEE
FOR DEVELOPMENT PLANNING IN ALASKA

Region I, the Alaska Panhandle, is set off geographically from the rest of the state by the Malaspina Glacier, the St. Elias Range, and the Canadian border. The geographical location of this southeastern region coupled with the topography of the land gives the area a number of characteristics that differentiate it from the rest of the state. The warm ocean currents and the coastal mountains contribute to its mild but rainy climate. The climatological conditions and the soil characteristics have produced the largest stands of hemlock and Sitka spruce in the whole state. And, finally, the geographic location of the region has guided the development of a transportation system that ties the region economically to Canada and the western U.S.

Region I is made up of a number of small towns of 5,000 to 15,000 people. The indigenous Native population differs from the rest of the state in that it is made up primarily of Tlingit, Haida, and Tsimshian Indians. Juneau, the capital of the state, is the nodal point of activity for the region; and Yakutat is the northernmost point of significant settlement.

Region II, the southcentral and southwestern area of the state, extends from the Malaspina Glacier on the west to the Attu Islands, the easternmost point on the Aleutian Chain. Region II contains the primary concentration of economic activity for the whole state. It constitutes the banking, insurance, wholesaling, and transportation hub of the state; and it houses the majority of the state's oil and fisheries industries. Anchorage, the state's only metropolitan area with over 100,000 people, is the focal point of this region; but the cities of Kenai and Kodiak are also areas of significant concentrations of people and economic activity. Relative to the rest of Alaska, Region II has the largest percentage of non-Natives, the lowest unemployment rate, and the largest percentage of people engaged in market-oriented work.

The Aleutian Chain, with its sparsely populated Aleut settlements and its strategically important military bases; and the Bristol Bay area, with its remote villages and harsh climate, have been included in Region II even though they do not share all of the characteristics of the rest of Region II. The differing qualities of these two districts require special attention, and they have been handled accordingly in the text. But, in general, these two districts are best handled by including them in Region II rather than in some other region. These two districts share with the rest of the region a common coastline and mountain range. They are linked to Anchorage by an air transportation corridor. They sustain a part of the livestock industry in the state that stretches from Kenai and Kodiak to the Aleutians. The fishing in Bristol Bay and the Aleutians is primarily commercial (as in the rest of Region II) and not subsistence (as in other regions). Finally, the prospect of oil and mineral discoveries in Bristol Bay suggest that in the future Bristol Bay may become even more closely

linked with the rest of Region II.

Region III contains the three election districts of Bethel, Kuskokwim, and Wade Hampton. The broad ethnic classification of which the Native inhabitants are members is the single factor that best helps to define this region. The Native population in this region is primarily made up of *Yupik*-speaking Eskimos as opposed to the *Inupiat*-speaking Eskimos in the northern districts of Nome, Kobuk, and Barrow (Region V). The economy of these people is basically subsistence hunting and fishing, though the advent of cooperatives is gradually turning fishing into more of a commercial venture. The commercial elements of Region III's economy are linked to the trade and financial services of Region II by an air transportation route between Anchorage and Bethel.

Region IV extends from the Canadian border to the Yukon and Koyukuk Rivers. The Native residents are primarily Athapascan Indians. The major area of activity is, of course, Fairbanks, where the University of Alaska is located. Fairbanks is linked to Anchorage by a highway, railway, and airway system. Region IV, like Region III, has a subarctic climate.

Region V, the northernmost part of the state, includes the Seward Peninsula and the Brooks Range. The Arctic climate subjects this region to intense and prolonged winters and strong winds. The large masses of permafrost that cover most of the region heavily influence the type of economy that exists in this region. Region V's Native population, composed of *Inupiat*-speaking Eskimos, the greatest number of which are located in the townsites of Nome, Barrow, and Kotzebue, rely on whale, walrus, and seals for much of their subsistence living.

In all but one case, the regions correspond to groupings of election districts so that the wealth of material that has previously been gathered on election districts by various state and federal agencies could be utilized. Each region has been treated separately and predictions made as to its probable growth. In order that a useful picture can emerge for the whole state, growth has been treated as a function of resource development within each region and economic activity in outside areas that are linked to the particular region. In other words, forecasts in each region can be added together to build a picture of growth for the whole state.

2. SCOPE AND METHODOLOGY

The scope and emphasis of the study is primarily economic in character. Noneconomic aspects of the subregions--health, education, housing, ethnic and social organization--have been incorporated in the study only where one or another bears directly on economic variables. The

dichotomy between the economic and noneconomic is in some respects, of course, an artificial one since the goal of economic growth is an improvement in the general welfare of the people measured by both economic and noneconomic variables. In the final analysis, regardless of how a particular policy question or economic prediction is phrased, the real meaning of the answer lies in how the general well being of the people concerned is altered.

The proper focus of a regional analysis, then, should be centered on a region's health and well being as measured by (a) per capita personal income, (b) basic economic stability, (c) economic growth, and (d) the amenities of life (educational, recreational, and cultural facilities; working conditions; and the general civic spirit). This study concentrates on only the first three of these dimensions. In part, these three were chosen for purposes of manageable analysis but more so because in the majority of instances the process of economic growth is complementary with an improvement in the amenities of life--an increase in personal income carries with it an improvement in cultural, recreational facilities.

In the few cases where economic growth can be achieved only at the expense of some deterioration in the amenities of life, a rational choice between the two goals can be made only if the community knows precisely what it is achieving (or giving up) in economic terms at the expense (or reward) of the aesthetic or cultural. A careful treatment of what the future values of economic variables might be is designed to permit the individuals in a community to decide in which cases the economic aspects should take precedence over noneconomic aspects.

The three dimensions of per capita income, employment stability, and economic growth are used extensively in this study; and the following few paragraphs contain an elaboration of certain aspects of these dimensions.

Per capita personal income is fairly widely accepted as one of the best single estimators of economic well being. The measure has several shortcomings, however, which make its application to the Alaskan experience difficult. A major drawback of this measure is that it says nothing about the distribution of income. As a measure of economic welfare over time and among regions in a developing area like Alaska, this is a serious weakness. If per capita income grows over time but the distribution of income becomes more unequal (say between Natives and non-Natives), the community may feel that economic welfare has deteriorated. Secondly, per capita income does not measure income derived from nonmarket sources. In many regions of Alaska, fish and game consumption is an important element in the real income of residents. Failure to account for nonmarket sources understates real income, and attempts to account for it have not been altogether satisfactory. Finally, real personal income can be obtained by

deflating money income to compensate for Alaska's above-average price level. Consumer price indexes for major cities have been computed and included in this study, but the problem of determining how these indexes will behave over time and what index should be used for areas that are not adjacent to major cities remains unresolved. On the other hand, the major component of personal income, wage and salary payments, is available by election district, thus permitting estimates on a regional basis of personal income, however crude, to be made.

Basic employment stability is of more than normal interest in the Alaska case since wide swings in seasonal unemployment are a major factor in variations in the level of economic activity throughout the state. The swings are even more pronounced in several of the regions. The two dimensions of employment instability that are of most concern--duration and variance--have received careful attention in this analysis. Both the duration and variance of instability will continue to loom large in the total Alaska picture, for in some *industries* growth can be achieved only at the expense of instability. Some *regions*, then, will be faced with the choice between stability and moderate growth or relative instability and more rapid growth.

Economic growth has become accepted rather generally as something "good" *per se*. The attachment to this concept stems from the fact that, if other things remain the same (for instance, income distribution), per capita income growth generally represents an increase in economic welfare. Since the various elements in a community's pattern of living seldom remain the same in a period of rapid growth, the effects of growth on the general well being deserve careful consideration. This is particularly true on the regional level where the economic growth of one region can impose external costs or diseconomies on another; e.g., pollution of one city's water supply resulting from the upriver development of a paper industry in another city. Such conflicts that arise between regions as well as similar ones within a region require some assessment by the community or communities involved as to whether the **total** costs of such developments are more than matched by the benefits that accrue.

Economic growth, then, has its costs as well as its benefits. An analysis of growth involves the two-fold problem of deciding where to go and how to get there.

This study includes an assessment of the existing patterns of activity in the form of a precise descriptive and statistical profile of each region and an analysis of how the existing pattern relates to the future. Simple time-series and regression analyses have been used for quantitative growth extrapolations. The nature of probable growth and development has been treated as to where it will take place (i.e., where the valuable resources are located within the state and where the growth centers are in each region), in which sectors (e.g., oil, gas, fisheries,

and forestry), and in which time spans (short, intermediate, and long). For purposes of this study, the short run is defined to be one to three years; intermediate, four to six; and long run, over seven years.

An attempt has been made throughout to indicate the appropriate connecting links between each of the regions and how the existing (and future) transport, power, and communication facilities affect the directional flow of commerce and economic ties between the regions. Following the five chapters devoted to the subregions of the state are chapters treating statewide and topically the relation of public finance, science and technology, and Native protest matters to growth and development generally.

3. USEFULNESS OF RESULTS

The broad goal of this study is to provide government agencies at every level a forecast of the economic future of the several subregions of Alaska in the reasonably proximate time period. As such, it does not make recommendations for policy but rather takes into account what the known and likely public and private sector activities will be and incorporates these into the estimates. Ideally, this study allows federal and state agencies (and to some extent, local governments and private enterprise) to design or reshape their investment projects and operating programs in accordance with the economic futures of the several subregions of the state within their purview.

SUBREGION I
Southeastern Alaska



CHAPTER 2

SOUTHEAST ALASKA--REGION I

1. DIAGNOSTIC CHARACTERISTICS OF THE REGION

A. Population, Employment and Income

Population, employment, and income data are key guides to the economic landscape of Southeast Alaska. Compared to all Alaska in the 1960s, Southeast Alaska has grown faster in population but slightly slower in employment and income. The population of the Southeastern region grew 18 percent, from approximately 37,000 to 44,000 persons, between 1961 and 1967, thereby increasing its share of Alaska's population from 12 percent to 16 percent (Figure 2-1). Employment increased 11.5 percent, compared to 12.4 percent for the state as a whole.

During the same period total employment in Southeast Alaska increased approximately the same as the total civilian workforce (Figure 2-2). The slower growth of the workforce and employment relative to population reveals a significant fact about Southeast Alaska. The population of the region is continuing its change from the rugged frontier dominated by the single miner and fisherman to a family society with increased numbers of dependents. This continuing change is borne out by statistics on the age of Southeastern's populace. Those 14 years of age and under made up 21.5 percent of the 1960 population; and although complete data are not available, there are indications that the proportion of young people increased rapidly in the 1960s. For instance, analysis of school enrollment data for the Greater Juneau area indicates that persons under 18 composed 45 percent of the 1965 population, compared to 39 percent in 1960.¹ The participation rate--the labor force as a percentage of the total population--is another measure of the increasing youthfulness of Southeast Alaska's population. This indicator declined very slightly from 41 percent in 1961 to 40 percent in 1966.

The importance of young people in the population picture of Southeast Alaska is a sign of the relatively heavier weight of natural increase--the difference between births and deaths--against migration as causes of population growth. Figure 2-3 indicates that about 62 percent of the increase in Southeastern's population between 1961 and 1966 was due to natural increase. Even so, the dependence on natural increase in Southeastern was considerably less than in the rest of the state. Only 8 percent of the state's population growth in the 1961-66 period was derived from in-migration. In part, the greater influence of migration in

FIGURE 2-1

TOTAL SOUTHEAST ALASKA POPULATION AND TOTAL ALASKA POPULATION,
1961-1967

Year	Southeast Alaska Population	Total Alaska Population	Southeast Alaska As A Percent Of Total Population
1961	37,363	236,669	15.1
1962	38,036	242,817	15.7
1963	38,683	249,904	15.5
1964	40,922	253,204	16.2
1965	42,290	265,192	15.9
1966	42,805	271,505	15.8
1967	44,030	278,820	15.8

Source: State of Alaska, Department of Labor, Employment
Security Division, *Current Population Estimates--
Alaska, By Election District, 1961-1966*,
Unpublished data.

FIGURE 2-2

SOUTHEAST ALASKA AVERAGE MONTHLY CIVILIAN EMPLOYMENT,* 1961-1966

	1961	1962	1963	1964	1965	1966
Total Civilian Workforce	15,449	14,867	15,829	16,504	16,900	17,133
Total Unemployment	1,586	1,254	1,282	1,243	1,306	1,303
Percent of Workforce	10.3	8.4	8.1	7.5	7.7	7.6
Total Employment	13,715	13,583	14,547	15,261	15,594	15,830
Self-employed, Agri- cultural workers, etc.	1,706	1,619	1,666	1,746	1,807	1,638
Government	4,590	4,442	4,908	5,110	5,265	5,425
Employment of Persons In Private Industry	7,419	7,522	7,973	8,405	8,522	8,757
Commodity Producing Industries	3,006	3,220	3,485	3,749	3,717	3,774
Mining	62	52	65	53	18	8
Contract Construction	633	515	628	741	754	577
Manufacturing	2,311	2,653	2,792	2,955	2,945	3,184
Distributive Industries	4,413	4,302	4,488	4,656	4,805	4,983
Trade	1,389	1,405	1,498	1,512	1,580	1,723
Finance, Insurance and Real Estate	230	241	244	286	301	319
Transportation, Communications and Public Utilities	1,635	1,562	1,644	1,713	1,738	1,691
Services & Miscellaneous	1,159	1,094	1,102	1,145	1,186	1,250

*Certain data, mostly in Mining and Finance, Insurance & Real Estate, estimated.

Source: State of Alaska, Department of Labor, Employment Security Division, *Workforce Estimates by Industry and Area*, 1961-1966.

FIGURE 2-3

SOUTHEAST ALASKA COMPONENTS OF POPULATION CHANGE, 1961-1966

Year	Natural Increase	Net Total Migration	Net Change
1961	929	1,031	1,960
1962	782	(109)	673
1963	782	(135)	647
1964	751	1,488	2,239
1965	708	660	1,368
1966	639	(124)	515
Total	4,591	2,811	7,402

Source: State of Alaska, Department of Labor, Employment Security Division, *Current Population Estimates--Alaska, By Election District, 1961-1966*, Unpublished data.

Southeast Alaska reflects the region's lower birth and higher death rates, that, in turn, are a sign of the population structure of the longest-settled region of the state. It also accompanied the statistical fact that regional data reflect interregional migration while figures for the state as a whole, of course, do not. The inflow of persons from other parts of Alaska, attracted mostly by government employment, has been an important factor together with the wood products industry, which has brought in loggers and mill workers mostly from outside Alaska.

Also important for understanding the economy of Southeast Alaska is the proportion of Native population. The number of Natives totalled 10,500 in 1967, a small increase from 1960 (Figure 2-4). But the percentage of the total Southeastern population that was Native declined slightly from 26 percent in 1960 to 24 percent in 1967. The 1967 Native percentage was, however, above the statewide average of 19 percent. The higher proportion of Natives in Southeastern indicates the presence of a high-unemployment, low-income group; although the Natives of Southeastern are considerably better off than those in other parts of Alaska in terms of the two indicators.

Analysis of a region's employment typically furnishes one of the best indicators of the state of its economy. Out of the total Southeast Alaska workforce of 17,133, 7.6 percent were unemployed in 1966--a significant decline from the 10.3 percent of 1961 and somewhat lower than the state average for the same year of 9.1 percent. The greater development of commodity-producing industries, chiefly manufacturing, in Southeastern is clearly marked. In Southeastern, basic industries made up 24 percent of total employment in 1966 compared to slightly less than 17 percent in all Alaska. The principal manufacturing activity is pulp and cant production with pulp mills at Ketchikan and Sitka and sawmills at Ketchikan, Wrangell, Petersburg, and Haines. The decline of fish processing can be followed through the statistics for such places as Juneau, where employment in canning and freezing has declined in the 1960's. Also, the decline of persons in the self-employed category reflects the decline of commercial fishermen.

Although commodity-producing industries are more important in Southeastern than elsewhere in Alaska and have shown the most rapid rate of increase in the 1960s, the most important category is government employment, 34 percent of the region's total employment. State employees are most numerous, followed closely by federal and, at a far distance, local government employment which nevertheless is the fastest-growing sector. Despite a dip in 1962, when both federal and state payrolls were reduced, government employment has increased 18 percent, considerably faster than distributive industries which showed a 13 percent employment rise. Of the major distributive sectors, employment in trade has increased fastest, with most of the increase in retail trade. The result has been

FIGURE 2-4

NATIVE AND NON-NATIVE POPULATION OF SOUTHEAST ALASKA
1960 and 1967

	<u>1960</u>	<u>1967</u>
Native		
Number	9,242	10,500
Percent	26	24
White & Other		
Number	26,161	33,530
Percent	74	76
Total	35,403	44,030

Source: State of Alaska, Office of the Governor, Division of State Planning, *Alaska's Population and Economy*, by Dr. George W. Rogers and Dr. Richard A. Cooley, 1962, Vol. II, p.28, and U. S. Department of the Interior, Bureau of Indian Affairs, Unpublished Data.

that trade has passed transportation, communications and public utilities as the largest distributive segment (Figure 2-2).

The greater proportion of natural resource-based industry in Southeast Alaska compared to other areas of the state is reflected in the seasonality factor. Although seasonality in employment is not as big a problem in Southeastern as in the far northern parts of the state, the problem is more extreme than in, say, the Anchorage area. In the 1960s there has been a swing of approximately 37 percent between high-month and low-month employment in Southeast (Figure 2-5) compared to 17 percent in the Anchorage area.

Southeast Alaska's total personal income has increased far more rapidly than employment. Total personal income has grown from \$95 million in 1960 to \$144,300,000 in 1966, a rise of some 52 percent (Figure 2-6). As expected from the employment picture, the government is the leading income producer. However, income from commodity-producing industries exceeds that from distributive and service industries, although the latter has greater employment. The main reason is the lower wage scale in the distributive sector, especially in wholesale and retail trade. Significantly, commodity-producing industries have surpassed the distributive sector since 1960, due largely to the rapid growth of the wood products industry.

Figure 2-7 indicates that the residents of Southeast Alaska have increased individual incomes in the early 1960s faster than persons in the state as a whole but not at the same rate as persons in the country as a whole. The per capita income of Southeastern increased 26 percent from \$2,683 in 1960 to \$3,371 in 1966 while per capita income increased 20 percent in Alaska and 34 percent in the United States. Southeastern's per capita income is still slightly below the state average.

One important qualification to these generalizations on income is the case of the Natives, whose economic conditions are well below those of the non-Natives. A measure of Native economic problems is their unemployment, which at 21 percent for the region, is nearly three times higher than for the workforce as a whole.²

The high cost of living must be mentioned as a factor reducing the relative well-being of Southeast Alaskans. Figure 2-8 indicates that virtually no change has occurred in relative living costs since 1961. Juneau now exceeds Anchorage. Transport charges and retail markups are the principal causes of Southeastern's cost problem.

FIGURE 2-5

SEASONALITY IN TOTAL EMPLOYMENT IN SOUTHEAST ALASKA

High Month and Low Month Employment
as A Percentage of Average Monthly Employment
1961-1966

	1961 %	1962 %	1963 %	1964 %	1965 %	1966 %
Total Employment						
High Month	120.8	120.0	123.7	119.8	116.6	120.0
Low Month	82.9	82.5	80.2	82.9	82.7	83.3

Source: State of Alaska, Department of Labor, Employment Security Division, *Workforce Estimates, Alaska*, 1961-1966.

FIGURE 2-6

DISTRIBUTION OF PERSONAL INCOME IN SOUTHEAST ALASKA, BY MAJOR SOURCES,
1960 and 1966
(In Thousands Dollars)

	1960	1966
Total Personal Income	\$95,000	\$144,200
Less: Personal Contributions for Social Insurance ^a	2,200	7,800
	<u>\$92,800</u>	<u>\$136,400</u>
Wage and Salary Disbursement	\$72,700	\$114,100
Government	26,000	46,100
Federal--Civilian	12,700	18,000
Federal--Military	2,300	3,100
State and Local	11,000	25,000
Earnings of Persons in Private Industry	46,700	68,000
Commodity-Producing Industries	20,100	36,500
Mining	400	b
Contract Construction	4,000	6,600
Manufacturing	15,700	29,900
Distributive and Service Industries	26,600	31,500
Wholesale and Retail Trade	6,000	10,200
Finance, Insurance and Real Estate	1,100	2,100
Transportation, Communications and Public Utilities	11,500	11,900
Services	5,800	5,900
Other Industries	2,200	1,400
Property Income, Proprietors' Income, Transfer Payments and Other Income	22,300	30,200

^a2.3 percent in 1960; 5.44 percent in 1966.

^bNot shown to avoid disclosure of data for individual firms.

Source: State of Alaska, Department of Labor, Employment Security Division, *Statistical Quarterly*, 1966, and Transportation Consultants and Wilbur Smith & Associates, *Alaska Highway Study*, 1965 Working Papers.

FIGURE 2-7

PERSONAL AND PER CAPITA INCOME,
SOUTHEAST ALASKA, ALASKA, AND THE UNITED STATES
1960 and 1966

	Southeast Alaska		Alaska		United States	
	<u>1960</u>	<u>1966</u>	<u>1960</u>	<u>1966</u>	<u>1960</u>	<u>1966</u>
Total Personal Income (\$ Million)	95.0	144.3	649.0	907.0	398.7	580.5
Per Capita Income (Dollars)	2,683	3,371	2,846	3,421	2,215	2,963

Source: State of Alaska, Department of Labor, Employment Security Division, *Statistical Quarterlies*, 1966, and Transportation Consultants and Wilbur Smith & Associates, *Alaska Highway Study*, 1965, Working Papers.

FIGURE 2-8

INDEXES OF INTERCITY DIFFERENCES IN THE COST OF EQUIVALENT GOODS AND SERVICES
 JUNEAU AND KETCHIKAN, ALASKA, COMPARED WITH SEATTLE, WASHINGTON
 (Costs in Seattle = 100)

	Juneau							Ketchikan						
	1961 ¹	1962	1963	1964 ²	1965	1966	1967	1961	1962	1963	1964	1965	1966	1967
All Items ³	123	122	122	124	124	125	127	119	117	117	119	117	118	118
Food	125	123	122	123	126	127	132	121	120	119	118	119	122	123
Housing	137	136	137	133	134	135	137	122	118	118	121	121	122	122
Rental Housing	177	175	180	150	151	147	147	148	143	146	126	127	127	126
Apparel and Upkeep	116	113	113	113	116	115	115	113	110	110	117	116	114	117
Other Goods and Services	113	113	114	119	116	117	119	115	116	118	117	113	113	113
All Items Less Housing	117	116	116	120	119	120	122	117	117	117	117	116	116	117

Notes:

1. The indexes for the years 1961 through 1963 compared costs in each Alaskan city with Seattle but were not designed to measure the differences in costs among the Alaskan cities. November is the pricing period used for the index for the period 1961-1963.
2. The indexes for 1964-1966 are designed to compare the cost of the average Alaskan family's spending pattern in each of the Alaskan cities with equivalent costs in Seattle. They are not entirely comparable with indexes for 1961-1963, but are estimated to be approximately one point apart.
3. For detailed breakdown on items included in the several categories, see "Indexes of Consumer Prices and Living Costs for Anchorage, Fairbanks, Juneau, and Ketchikan, Alaska - Autumn 1966", SF BLS 7-13, Bureau of Labor Statistics, San Francisco, California, March 21, 1967.

Source: Bureau of Labor Statistics, "Indexes of Consumer Prices and Living Costs for Anchorage, Fairbanks, Juneau, and Ketchikan, Alaska", Autumn, 1961-1967.

B. Area Economic Profiles

Southeast Alaska contains five subregions which, despite more intensive economic links in recent years, maintain considerable autonomy. Interregional ties have been strengthened in recent years through the increased importance of such activities as log traffic to the various mills from cutting areas and dispersion of freight on the Marine Highway System from Ketchikan and Juneau to other communities; but ties between most of the subregions in Southeast Alaska and areas outside the region, especially Seattle, are of equal or even greater importance. Thus, analysis of the region's key areas is justified by their economic autonomy as well as by differences in their principal employment-generating activities.

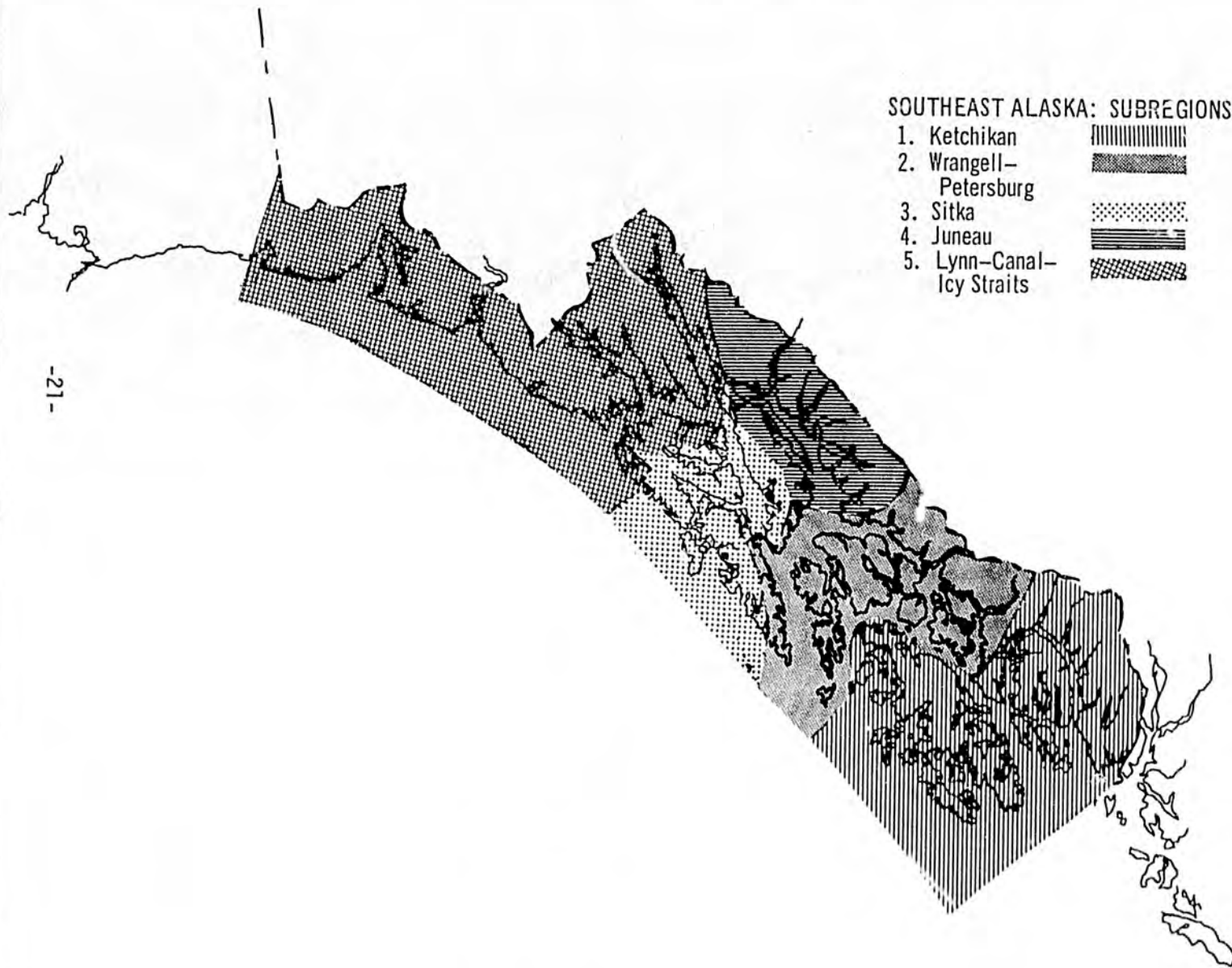
Following are brief profiles of the five principal subregions.
(Figure 2-9 indicates the geographic area boundaries.)

Ketchikan Area Profile

	<u>1961</u>	<u>1966</u>
Government employment	669	1,050
Other civilian employment	3,217	3,863
Total civilian employment	3,886	4,913
Unemployment as a percentage of total civilian workforce	14.5	8.5
Government employment as a percentage of all civilian employment	17.2	21.4
Population	12,461	13,769

The principal industry of the Ketchikan area is logging, lumbering, and pulp manufacture, which together with government employment, accounts for most of the increase in civilian employment between 1961 and 1966. Ketchikan is the site of the Ketchikan Pulp Company, a 200,000-ton-per-year dissolving pulp mill, which is estimated to account for 1,000 employees in the mill and in the woods. Rail barges from Prince Rupert serve the mill, bringing in chemicals and other supplies and taking out the pulp. Ketchikan Spruce Mills, an export cant mill with a capacity of about 180,000 board feet per shift, is also located in Ketchikan and has recently started two-shift operation. Georgia-Pacific Company, Inc., one of the owners of Ketchikan Pulp Company, recently purchased Ketchikan Spruce Mills. A significant development since the purchase has been a diversification of marketing. The mill now sells half its output through Wrangell Lumber Company, the dominant trading channel

FIGURE 2-9



for lumber between Alaska and Japan, and the other half through a Japanese trading company. Ketchikan is also the site of three major fish-processing plants.

While total civilian employment increased by 26 percent from 1961 to 1966, the population increased by only 10.5 percent between 1961 and 1966, indicating a healthy balance between jobs and people evident through the marked decline in unemployment.

Wrangell-Petersburg Area Profile

	<u>1961</u>	<u>1966</u>
Government employment	235	363
Other civilian employment	1,113	1,434
Total civilian employment	1,348	1,797
Unemployment as a percentage of total civilian workforce	18.6	13.3
Government employment as a per- centage of all civilian employment	17.4	20.2
Population	3,579	5,287

The principal industries of the Wrangell-Petersburg area are logging-lumbering, fish-processing, and government. The manufacturing and government sectors produced most of the increase in employment in the years 1961-1966, but increases in the government sector were less important than in manufacturing. Within the latter sector, increased production at Wrangell Lumber Company and the restarting of operations at Alaska-Pacific Lumber Company (now called Alaska Forest Products, Inc.) accounted for most of the increased employment, with the continuing prosperity of the fish-processing activities at Petersburg also contributing. By 1966 the combined export to Japan of the two Wrangell mills was 64 million board feet, increasing to nearly 80 million board feet the following year as Wrangell Lumber Company started two-shift operation.

The three major fish-processing plants at Petersburg are well diversified, having produced a total of 187,000 cases of canned salmon, 2,200,000 pounds of frozen salmon, and 3,950,000 pounds of frozen halibut in 1966, along with other fish products such as shrimp and sablefish. Petersburg is one of the principal fish-processing centers in Alaska, and most of its products are shipped to Seattle.

Population and employment have both increased rapidly in the Wrangell-Petersburg area, the former growing 48 percent between 1961 and 1966, and the latter one-third. Unemployment has decreased, partly due to the population mix which includes increasing numbers below working age,

as Wrangell especially becomes a more stable community. Another factor is the smoothing out of seasonal fluctuations in the fishing industry.

Sitka Area Profile

	<u>1961</u>	<u>1966</u>
Government employment	827	846
Other civilian employment	1,523	1,590
Total civilian employment	2,350	2,436
Unemployment as a percentage of total civilian workforce	12.4	5.4
Government employment as percentage of all civilian employment	35.2	34.7
Population	8,143	7,301

The Sitka area is unique in Southeast Alaska in that government employment has not been a principal force in increasing the total civilian employment and, in fact, its relative position in Sitka's employment situation declined. Sitka is also the only area in Southeast Alaska to lose population in the 1961-66 period. The decline was the main reason for the sharp decrease in unemployment, as employment increased only slightly.

Other than in government, small increases occurred in manufacturing, chiefly at the Alaska Lumber & Pulp Company mill, and in trade. Two small fish-processing plants are also present in the Sitka area, employing about sixty people at the height of the summer season. Sitka is also an educational and institutional center, possessing a Public Health Service Hospital, the Alaska Pioneer Home, Mt. Edgecumbe Bureau of Indian Affairs High School, and the Sheldon Jackson Junior College.

Juneau Area Profile

	<u>1961</u>	<u>1966</u>
Government employment	2,709	2,937
Other civilian employment	2,734	2,822
Total civilian employment	5,443	5,759
Unemployment as a percentage of total civilian workforce	5.6	5.2
Government employment as a percentage of all civilian employment	49.8	51.0
Population	10,462	13,227

Government employment has been the principal motive force in Juneau's employment increase. Manufacturing employment has declined with the shift of fish-processing and lumbering activities elsewhere. Other increases have been spread throughout the range of distributive and service industries. As the state capital, Juneau has experienced a significant increase in state employees, but the most rapid rate of increase was in local government employment which grew 39 percent between 1961 and 1965. Federal government employment declined slightly.

The principal growth in Juneau's population, which led all of Southeast Alaska in rate of growth from 1960 to 1966, has been a great increase in dependents, accompanying the continued shift from a resource-based economy to one relying mainly on government employment. While population grew 26 percent, employment increased only 6 percent between 1961 and 1966. However, the continued low unemployment rate indicates that most of the new people were not in the labor force.

Lynn Canal-Icy Straits Area Profile

	<u>1961</u>	<u>1966</u>
Government employment	150	229
Other civilian employment	686	696
Total civilian employment	836	925
Unemployment as a percentage of total civilian workforce	10.2	11.3
Government employment as a per- centage of all civilian employment	17.9	24.8
Population	2,718	3,194

Employment in the Lynn Canal-Icy Straits area, which includes the cities of Haines, Skagway, Hoonah, and Yakutat, increased about 11 percent while the population grew by 17.5 percent. Unemployment increased slightly. The only significant employment increases occurred in the government sector, with lesser increases in construction. Lumbering and logging activity has increased markedly during the last two years with the enlargement of the two cant mills at Haines. However, increased employment in this sector was not sufficient to offset losses in fish-processing, and manufacturing employment decreased. A new fish-processing plant is going into Yakutat aided by an Economic Development Administration grant for a dock, and the Forest Service is proceeding with road construction in the Yakutat area which will make additional timber stands commercially accessible.

2. ECONOMIC FORCES DETERMINING THE FUTURE OF THE REGION

Projections of Southeast Alaska's economic future require analysis of the sectors that are expected to provide most of the motive force for the region's growth. The key areas are forest products, fisheries, government, and tourism. Transportation, electric power, and communications--important adjuncts to development--will also be considered in this section.

A. Government

The government sector expanded at a decreasing rate during the early 1960s following the initial dip in 1962. Although the next year this employment area grew by 10 percent, it declined to a growth rate of 4 percent in 1964 and 3 percent in 1965 and 1966.

The various sectors of government employment showed sharply divergent rates of growth. Despite several variations during the 1961-66 period, federal government employment was at the same level in 1966 as in 1961: 2,100. The state and local sector grew by approximately one-third from 2,500 to 3,300 with the local sector being the fastest growing area; although state government employees formed the most numerous segment.

It is expected that the government sector in Southeast Alaska will continue to grow, although not at the same rate as in the 1961-66 period. The future rate for state and local government employment is projected to be approximately 5 percent a year. Under the assumption of a gradually increasing commitment to Alaska's development, federal government employment is expected to increase; although at a slower rate than state and local government, or approximately 3 percent a year.³

B. Forest Products Sector

Figure 2-10 shows the progress of the forest products industry, the leading industrial activity of Southeast Alaska. With pulp mills at Sitka and Ketchikan and major sawmills at Ketchikan, Wrangell, Petersburg, and Haines, output has increased about 55 percent since 1961; and a momentum to timber sales and rising stumpage prices has resulted. Southeast Alaska clearly dominates the wood products industry of the state. Out of a total estimated dollar value of \$73 million in 1966, over \$70 million came from the region.

Almost the entire production is exported to Japan. In 1966, this amounted to about 150 million board feet of cants (log scale) and 160,000 tons of dissolving pulp. The Southeastern sawmills sell virtually their entire output through Wrangell Lumber Company, the Japanese-owned

FIGURE 2-10
SOUTHEAST ALASKA ANNUAL TIMBER CUT AND VALUE
1960-1966

YEAR	NATIONAL FOREST		STATE FOREST			TOTAL			EST. END PRODUCT VALUE-\$
	VOLUME CUT-MBF	VALUE CUT-\$	EST. END PRODUCT VALUE-\$	EST. VOLUME CUT-MBF	EST. VALUE CUT-\$	EST. END PRODUCT VALUE-\$	EST. VOLUME CUT-MBF	EST. VALUE CUT-\$	
1960	347,496	859,888	45,761,748	189	566	16,706	347,685	860,454	45,778,454
1961	338,207	896,588	45,154,016	1,788	5,192	158,041	339,995	901,780	45,312,057
1962	366,276	922,486	48,733,022	6,185	17,991	546,692	372,461	940,477	49,279,714
1963	395,143	924,338	50,894,418	9,570	19,896	845,892	404,713	944,234	51,740,310
1964	443,736	910,234	57,685,680	16,330	53,236	1,443,409	460,066	963,470	59,129,089
1965	397,610	816,796	52,973,580	21,745	51,337	1,922,041	419,355	868,133	54,895,621
1966	474,277	1,111,642	67,831,097	28,098	66,355	2,483,582	502,375	1,177,997	70,314,679

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Source: Alaska Division of Lands, *1966 Annual Report*, and U. S. Forest Service unpublished data.

parent of the Alaska Lumber & Pulp Company, which is also a major producer. The Alaska Lumber & Pulp Company pulp mill at Sitka accounted for the pulp export to Japan, with the remaining 20,000 tons of its production going to the United States and other countries. The Ketchikan Pulp Company mill at Ketchikan produced an estimated 210,000 tons of dissolving pulp in 1966, almost all of it going to the contiguous United States.

The dependence on the Japanese market, especially on one channel of that market, has become intertwined with the question of round-log exports from the region. A recent study recommended limited round-log export to create competition and more fairly value the stumpage.⁴ In any event the whole effect of log exports in the Alaskan context requires more thorough analysis. The major arguments may be briefly outlined. Considerable support for allowing some log export from Alaska can be drawn from statements on the Pacific-Northwest log export experience. For instance, the Forest Service Pacific Northwest Forest and Range Experiment Station finds that logs exported from the Pacific Northwest produce \$100 per 1,000 board feet in income for landowners, loggers, longshoremen, and exporters while income would be only \$95 per 1,000 board feet if the logs were processed into lumber at domestic mills.⁵

The Treasury Department in its brief for the round-log export hearings earlier this year suggested that the principal problem connected with log export is supply from federal forests:

The major issue is the computation of the allowable cut, which is intended to obtain a steady yield of timber over time. Under present policy much good timber may be permanently lost, and the growth capacity of the forest lands never realized. Timber will rot on the forest floors in Washington, Oregon, and Alaska, under present policy. In part, it is not adequately recognized that new stands of trees grow fairly rapidly--i.e., have a positive real rate of interest, and the old, overripe pine forest actually has a negative rate of interest--mortality losses over time exceed new growth, and therefore the usable volume of harvestable timber is reduced.

. . .

Moving to an accelerated-cut policy will yield larger 'one-time' gains, spread over several decades...⁶

The Treasury Department recommended holding export of unprocessed logs from Alaska and the Pacific Northwest to the 1967 level of about 1.7 billion board feet. The report also suggests a change in the Jones Act to allow lumber to be sent from Alaska to the East Coast in foreign bottoms. Such a change would be beneficial to the forest products economy of Southeastern by opening the possibility of increased competition and higher prices in addition to more intensive processing. Government stumpage payments would also be expected to increase.⁷

The opponents of log exports focus their arguments on the rise in stumpage with the increase in Japanese log purchases and the closing of northwestern mills in Oregon and Washington. The proponents of export cite increased employment in the whole northwestern timber products industry since export became active and claim that the closing of mills is due to the trend towards large integrated operations.⁸

In any case log export from Alaska would take place in a different setting than in the northwest. Mill unemployment could not be attributed to the trend towards integration. Also, since virtually the entire lumber industry in Alaska is geared to export, some amount of capital facilities for the export trade has already been installed; although this could be offset by the lower labor content in Alaskan lumber cited previously.

There is also a real question regarding the comparative benefits of log export from southeastern Alaska. Approximately one-half the presently allowable cut of one billion board feet is being taken, and logging employment is approximately 1,000 persons with 1,200 employees in the mills. If all the pulp and sawmills primarily dependent on the Japanese market closed down with log export, mill unemployment in the order of 700 persons might result. An increased cut of 350,000,000 board feet would be necessary to generate equivalent logging employment, assuming a labor complement of two man-years per million board feet. This would stretch to the limits or slightly exceed the present annual allowable cut assuming that the Champion-U.S. Plywood allotment of 175 million board feet is used. A tentative conclusion would be that allowing log export from Southeast Alaska would spur cutting but, under present allowable yield limitations, the dislocations of mill closures would barely be equaled by increased logging employment. Of course, the question of major mill closures may not be relevant if the Treasury Department's proposal is seen to apply only to new sales and not to the allowable cut already committed to existing mills.

The principal development on the horizon in the Southeastern forest products industry is a pulp mill-sawmill-plywood complex, plans for which have been announced by U. S. Plywood-Champion Papers, Inc., which has an option on 8.75 billion board feet of Forest Service timber in the Juneau and Yakutat Working Circles. The company has until mid-September, 1968, to sign a contract agreeing to build a pulp mill by 1973. The site for the complex is not yet known, but two places in the Juneau area are strong contenders. If it does "come in," such an integrated development

might employ 750 people plus about 350 in the woods.⁹

If a major forest products complex does not develop in the time frame of this study, the large bloc of timber would most likely be broken up into smaller sales as a basis for expansion of present sawmills in the short term. Increased employment would be in the order of 100 persons in the mills and a roughly similar amount as loggers, and a similar increase could be expected in the intermediate and long terms.

C. Fisheries Sector

The value of the Southeastern fish catch has more than tripled between 1960 and 1966, although the growth has not been steady and there is a definite question on future trends (Figure 2-11). In this region also the spectacular increase in the salmon catch of 1966 was followed by the disastrous season of 1967. Salmon continues to be the dominant species, with halibut, shellfish, and other fish (chiefly herring) stable or declining. Approximately half the value of the "other fish" category came from herring eggs on kelp, a new industry.

The table indicates the overall stability of total value to the fishermen due mostly to the movement of salmon prices opposite to the catch amounts. There was a smaller number of fishermen at the end of the 1960-1966 period than in the beginning, causing an increase in value paid per fisherman. The number of fish-processing employees also fell.

The fishing industry in Southeast Alaska is undergoing marked change. Larger boats with better equipment have come into use, allowing the reduction in manpower and increased value per fisherman. On shore, frozen fish products are growing at the expense of canned fish; and some plants have closed with production centered at more advantageously located spots.

The industry has several areas of opportunity for improvement. Further change from canned to frozen salmon would increase the value. Facilitating such a change would be improved transportation, centering around adequate loading facilities for refrigerated container cargo at the outports of the region. The application of new techniques in mechanical shrimp peeling, already used in Kodiak, could increase utilization of this resource.

Development of bottomfish provides an opportunity for dramatically increasing the total fisheries output of this region. Financing a pilot filleting operation in Petersburg has been discussed by the Bureau of Commercial Fisheries and the Economic Development Administration, but the

FIGURE 2-11

SOUTHEAST ALASKA

ANNUAL FISH CATCH AND VALUE, * 1960-1966

	SALMON		HALIBUT		OTHER FISH		SHELLFISH		TOTALS	
	Catch (lbs.)	Value to Fishermen (\$)	Catch (lbs.)	Value to Fishermen (\$)	Catch (lbs.)	Value to Fishermen (\$)	Catch (lbs.)	Value to Fishermen (\$)	Catch (lbs.)	Value to Fishermen (\$)
1960	34,238,553	6,327,373	22,495,620	2,511,632	86,822,803	1,710,622	5,339,964	293,998	148,896,940	10,843,625
1961	102,565,300	12,482,830	29,423,600	4,394,810	75,817,790	723,000	6,343,700	364,680	214,150,390	17,965,320
1962	83,425,850	12,762,640	23,339,000	6,208,170	35,102,290	516,050	9,104,410	744,200	150,971,550	20,231,060
1963	102,412,430	14,844,120	17,592,000	3,390,860	32,679,570	603,670	8,902,200	797,190	161,586,200	19,635,840
1964	115,948,420	15,985,610	14,645,000	3,110,000	49,008,050	1,076,790	8,264,000	752,930	187,865,470	20,925,330
1965	83,139,060	13,458,630	23,809,660	5,237,511	26,459,352	678,430	6,830,752	521,790	140,238,824	19,896,361
1966	140,729,181	24,206,885	18,954,000	5,972,300	16,064,433	1,052,956	6,443,094	520,368	182,190,708	31,702,509

Source: Alaska Department of Fish and Game, *Commercial Fisheries Statistics*, 1960-1966.

* Neither catch nor value can be equated directly to Alaska income and employment since there is no breakout of who made the catch and to whom the value accrued, e.g., Alaska, Seattle fishermen.

market presently appears adverse. More research on location of species, cheaper processing, and markets should be done to take advantage of what is thought to be a large resource. Among the leading beneficiaries of diversification could be the five Native community-owned canneries in the southern part of the region, which have been in financial difficulties since organization in the late 1950s. An organizational improvement here would be operating these canneries as a unit with the communities sharing in the total profits. This would allow a certain diversification through operating the most advantageously located plants as related to the particular runs.

In the short and intermediate terms one can expect a very modest increase in value from a continuation of the trend to frozen salmon and limited additional development of shrimp and bottomfish. Any more substantial growth, principally from the latter two sources, must await the long term at which time it could mean increased employment of perhaps 200 persons in fish processing.

D. Tourism Sector

Tourism is one of the most dynamic elements of Southeast Alaska's economy and, unfortunately, one in which quantitative data are most lacking. Some of the figures developed by the Cresap, McCormick & Paget study for the state have applicability to Southeastern. The study estimates that the number of tourists in Alaska increased from 59,200 in 1964 at an annual average growth rate of 14 percent to 86,700 in 1967. Another estimate is that approximately 60,000-65,000 tourists passed through Southeastern in the latter year. Based on the foregoing data, tourists' expenditures amounted to \$3 million of personal income in Southeastern last year and were responsible for approximately 500 jobs.

The region abounds in tourist attractions. The scenery is spectacular, with snow-clad mountains and glaciers terminating in protected waterways. Fishing is excellent, and hiking and climbing opportunities are plentiful. The legacy of the Russian past and the Native culture are colorful attractions. The region contains the state capital, which is also an old-time mining center.

An important problem that will have to be overcome for full development of the tourist industry in Southeastern is that there are only limited activities for tourists in the principal cities. One solution is to provide better access and facilities for taking advantage of the unique scenic and sport possibilities outside the centers. One instance where this has been well done is the Glacier Bay area, where a very attractive National Park Service lodge has been built and frequent air service is available during the summer. Similar establishments could be located at

other worthwhile places. Another solution is to offer more activities in the centers.

The recent airline mergers of Alaska carriers should be beneficial through more active and more organized promotion. The "Dollar Defense" program will also be an aid to Alaskan tourism that might last through the intermediate term. Assuming more active promotion, the continued international dollar gap into the intermediate period, development of more attractions, and continued supply of transport capacity (especially ferries), tourism in the region can be expected to increase by as much as 50 percent in the short term, double in the intermediate term, and increase by four times its 1967 level by 1985.

E. Minerals Sector

The mineral industry of Southeast Alaska is now virtually nonexistent. Only a small barite deposit near Petersburg is being worked. The region has large iron deposits in the order of one billion tons of ore each at Klukwan near Haines and at Snettisham and Union Bay between Juneau and Petersburg. These deposits are low grade and contain titanium in a quantity that makes the ore difficult to work under present technology. Southeastern also possesses a large copper deposit at Sumdum, also between Juneau and Petersburg, and a promising nickel deposit, which, unfortunately, is located under Brady Glacier in the Glacier Bay National Monument.

The region has, of course, produced large amounts of gold. Although no gold mining has been done since the beginning of World War II, there is renewed interest in existing claims with the recent rise in the gold price. However, it is anticipated that a considerable additional increase in price would have to take place before operations would start again.

At best, only limited mineral development will take place in Southeastern even in the long term, say by 1985. Such development might include the small higher-grade iron-copper deposits and uranium deposits near Ketchikan, some development of the region's rich limestone deposits, and a small amount of work on gold deposits, possibly underwater. This could mean an addition of several hundred employees, but such a projection is made under the assumption of no technological breakthrough in processing of titanium-bearing iron ore.

F. Transportation, Power, and Communications

(1) Transportation

Transportation, power, and communications have been significant

impediments to the Southeast region's development. Fortunately, recent and possible future changes hold the promise of substantial improvement.

In water transportation, the region has been burdened with high overall rate levels compared to Southcentral Alaska, which is served by competing modern and efficient railcar and trailer van services. The Federal Maritime Commission commenting on the relation of transportation and terminal charges to Alaska prices in its *Alaska Trade Study* concluded that,

...If merchants at Juneau order food products from Seattle, their transportation costs on apples, lettuce, flour, and potatoes would raise corresponding F.O.B. prices 29, 41, 29, and 22 percent respectively (according to 1965 prices and rates). Transportation charges on lumber and cement would raise the prices on these items approximately 71 and 100 percent respectively. ¹⁰

The steamship company serving the area has recently phased out most of its ships on the Southeastern run and replaced them with barges. It and other shippers have made use of the Alaska State Ferry since it extended its run to Seattle early this year. The latest rates published by the Alaska Steamship Company include slight reductions in van-load lots and increases in less-than-van-load shipments.

Other improvements in marine transportation to be looked forward to include a distribution system featuring freight movement by fast ships with efficient handling equipment to redistribution centers such as Ketchikan and Juneau with delivery to other ports by smaller vessels. A limited version of such a system is in operation for a small amount of freight, using Alaska Steam's barges and the Ferry System. Better facilities for handling container cargo, especially at Ketchikan, Sitka, and Petersburg; and reduction of high terminal rates could go a long way toward lowering the cost of living in the region.

Besides Alaska Steam, Northland Marine Lines, Inc., cruise ships, and the Alaska Marine Highway (State Ferry System) serve southeastern Alaska. The principal economic significance of the Alaska Marine Highway to Southeast Alaska is as a conveyor of tourists. Between 1964 and 1967 the number of tourists using the State Ferry System grew by an estimated 63 percent, from 11,650 to 18,950 with most of the tourists attributable to the Southeastern system. A recent study of the Greater Juneau Borough shows the significance of ferries in bringing tourists to that community. Between 1962 and 1965, total estimated number of tourists increased from approximately 23,000 to 34,000 with ferry traffic increasing from zero in 1962 to 11,650 in 1965; air tourists increasing

from 7,500 to 9,600; and cruise ship passengers decreasing from 15,300 to 14,800.¹¹ Ferry traffic is expected to show a marked increase with the addition of a new vessel this year, the *M.V. WICKERSHAM*, and the extension of service to Seattle begun at the end of last year. The number of cruise ship passengers is also expected to grow with the addition of a new ship by Westours, Inc.

The other vital Southeastern transport mode, air transport, is also undergoing large changes: The merger of Alaska Coastal Airlines into Alaska Airlines and increased use of land-based aircraft in place of amphibians raises the possibility of at least keeping down future costs and rate increases.

Fields of a length sufficient for jets are under construction at Petersburg and Wrangell, and planning has started for a field to serve Ketchikan. The new fields will most likely be served by propeller planes of roughly similar capacity as the Convairs presently in service.

Planning is now going forward for an airport at Hoonah, with a possibility of Alaska Airlines serving it with F-27 service for passengers and cargo, principally fish, which would connect with southbound freight service at Sitka. The recently completed transportation study on all of Alaska points to the feasibility of an area airport at Craig and Klawak and also indicates the continued need for amphibians and float planes serving the smaller communities where airport construction would be uneconomic.¹² The key issue for the future of air transport in Southeastern will be whether the expansion of land-based service will result in significant rate reductions.

Alaska Airlines absorbed Cordova Airlines and took over Cordova's route between Anchorage and Juneau by way of Cordova, Cape Yakataga, and Yakutat. The take-over has so far meant little to the region as equipment and scheduling have stayed the same.

Although Southeastern air service will probably continue to be separate from the rest of the Alaska Airlines system, benefits can be expected from some common maintenance and the aggressive promotion program of Alaska Airlines. The Western Airlines-Pacific Northern Airlines merger will be felt in Southeastern mainly through increased tourist promotion. Competition between these two airlines should prove beneficial in the longer term.

Ultimately, significant impact on the Southeastern economy can be expected from the Forest Highway Program, which aims to create a system of roads and short ferry links throughout the region. Substantial completion of the system would have special impact on tourism, and this is an important governmental good.

(2) Power and Communications

Provision of electric power is an area awaiting future breakthroughs for control of high costs. Industrial users in Ketchikan, Wrangell, Petersburg, and Juneau are paying 2.5 to 3 cents per kilowatt hour and residential users up to 50 and 60 percent higher than industrial rates.

The centers of population rely mostly on diesel generation, but development of presently studied small hydroelectric projects would have only a limited effect in controlling high rates. The sixteen potential hydroelectric projects listed by the Department of the Interior totaling 223 megawatts installed capacity would make firm power available at bus-bar costs of from 6.9 to 11 mills per kilowatt hour at 1966 prices (exclusive of fish and wildlife mitigation costs and assuming a 75-year payoff period with 3-1/8% interest).¹³

The Snettisham hydroelectric project, 28 air miles south of Juneau, is now under construction; and the first stage is scheduled for completion by December, 1972, with an installed capacity of 46,700 kilowatts. The entire project calls for 70,000 kilowatts. Present estimates are that the first stage will make power available in the Juneau area at around 10 mills per kilowatt hour at the Juneau bus-bar, assuming a 55 percent load factor. There should be substantial power available from the Snettisham project for industrial use after satisfying residential demands. However, the sawmill and plywood mill which have been proposed for the Juneau area would not likely be heavy electricity users.¹⁴ Development of the Snettisham iron deposit and the Sumdum copper deposit in the area of the hydroelectric project would not be heavy power users under previously considered techniques. Snettisham does not have a large enough block of power, even if it were at low rates, to attract materials for processing from outside the area.

The projected rate for Snettisham power delivered in Juneau is approximately the same as the present rate for power generated by diesel and small hydro plants. It may be that the main hope for Snettisham power is that, although it may not reduce electricity rates in Juneau, it will serve to slow the increase that would occur without it. Two basic controls must be exercised with regard to the Snettisham power: Construction costs must be kept under control or financing arranged so that the generated cost of power is kept within bounds; and regulation must be exercised to ensure that savings are passed to the consumers. The former responsibility rests with the Corps of Engineers and the Alaska Power Administration, the latter with the state Public Service Commission.

The principal hope for a large block of cheap power would be the Yukon-Taiya project. Potential development involves installation of 1,200 megawatts initial capacity with ultimate capacity of 3,200 megawatts. The

bus-bar rate is estimated at 2.4 to 4 mills. It appears that the aluminum industry is no longer interested in Yukon-Taiya power as it apparently was some years ago, but at such low rates Yukon-Taiya power could be transmitted considerable distances in the southeastern region to supply industrial and residential demand at lower rates than most other plants, hydroelectric, thermal, or nuclear. Use of Yukon-Taiya would require an intertie to other areas.

Intertie with Canada is another possibility for bringing low-cost power to the region. Considerable negotiation with the Canadians would be necessary for this as for the Yukon-Taiya project, the latter being dependent upon the Canadian part of the Yukon River. In the short and intermediate terms, the region will probably see additions to the power supply in the form of diesel-fired plant or small hydroelectric projects such as the Lake Grace project near Ketchikan and the Takatz Creek project near Sitka, both of which have been proposed to the Congress. Although high-cost projects, they would be improvements over the present power situation in those communities.

Interties with Canada and the Yukon-Taiya project do not seem to be on the horizon in the six-year time frame.

The communications services of Southeast Alaska, like those of Alaska as a whole, are far more expensive than the rest of the country and a definite hindrance to its economy. The long-lines system must be modernized to bring down costs and improve service. This should be accomplished with the sale of the system to the private sector in 1969-1970. Some of the problems of telecommunications in Southeastern are at the local level. New subscribers find it difficult to obtain telephone service. Several of the local companies have been acquired by the Continental Telephone Company, most recently the Juneau and Douglas Telephone Company. Improvements in local service should come at least by the intermediate term period.

G. Linkages with Other Regions

Southeast Alaska presently has governmental and financial ties with other regions of the state, but it retains among all the regions the strongest ties to Seattle. It is also unique in the extent of links to Canada. The presence of the decision-making apparatus of the state government and the regional offices of several federal agencies have led to statewide governmental linkages. Through the statewide banking system, the region depends to a great degree on financial services headquartered in Anchorage, with some legal and financial services coming from Seattle. For many tourists the region is the first stop before going on to other parts of Alaska.

In water transportation, Southeast Alaska is dependent for freight inflow mainly upon Seattle, with small amounts coming from Vancouver to Skagway by the White Pass and Yukon Railroad container ship. The region also serves as a conveyor of traffic from Vancouver to the Yukon Territory through Skagway and has served a similar function for outbound asbestos, copper, and zinc-lead-silver shipments from the Yukon to Vancouver. It will shortly transship zinc from the Yukon through Skagway to Japan. Pulp shipments move to Japan and other countries as well as by rail-barge to the Eastern United States.

Considerable discussion has taken place concerning shipment of ores from the Yukon by highway through Skagway and Haines. Present plans call for shipping an estimated 30,000 tons a year of lead, zinc, and silver from the Anvil Mine northeast of Whitehorse over the existing trackage of the White Pass and Yukon Railroad through a new loading dock at Skagway, able to take 35,000-ton ore carriers. The lead, zinc, and silver will be sold through a consortium of Japanese firms under an eight-year contract. Presently, copper from the New Imperial Mine near Whitehorse; lead, zinc, and silver from the United Keno Hill Mine east of Dawson; and asbestos from the Cassiar Mine on the Yukon River just east of the Alaska-Canada border are moving through Skagway for shipment south. In 1966 slightly over 100,000 tons of ore concentrates moved through Skagway--78,203 tons of asbestos and 22,143 tons of lead, zinc, and silver. In-bound traffic to Skagway totaled over 140,000 tons in 1966, almost all brought by the modern container, petroleum, and mineral-products carrier of the White Pass and Yukon Railroad and bound for the Yukon Territory over the railroad from Skagway to Whitehorse. The company has started construction of another identical vessel.¹⁵

The shipments through Skagway are handled in a machinery-intensive manner and generate only an estimated longshoring employment of twenty men. Employment of a portion of these is justified by the cruise ships that call at Skagway. The immediately prospective and future mineral developments in the Yukon will probably not generate much additional employment.

There are indications that in the future Southeastern will develop more ties with Canada. These are likely to be in power transmission, as mentioned previously, and in highway construction.

A recent study for the Federal Field Committee for Development Planning in Alaska points to other possible developments in Southeast Alaska to facilitate shipment from the Yukon and northern British Columbia in these terms:

...In particular, Haines will become an increasingly important shipping point for ores from the Yukon; Skagway will handle

greater tonnage to and from the Yukon; the Wrangell area will have a modern port to handle British Columbia ores and supplies; Hyder will benefit from the growth of its close neighbor, Stewart, British Columbia; and Prince Rupert will expand to handle the rapidly increasing highway and ferry traffic. Traffic on the Taku River may be resumed, and there may be demand for export of Canadian ores and timber products through the Unuk River near Ketchikan--possibly at some more distant date, through the Alsek River east of Yakutat. All of this depends, however, upon formulation of appropriate arrangements.¹⁶

Future mining developments will force a decision on whether to make the White Pass and Yukon Railroad standard-gauge and press for highways. There has been renewed interest in the Skagway-Carcross road.

The study points out that prior southeastern Alaska-Canada contacts have focused on maintenance of transportation systems--chiefly the Haines cutoff, which before last year, was maintained by the Alaska Department of Highways under contract to the Canadian government and now is being maintained directly by the Canadian government; pipelines to Interior Alaska and Northern Yukon; and ferry service. The latter includes complementary scheduling of the Alaska state ferries and the British Columbia ferry from the tip of Vancouver Island through Prince Rupert.

Southeast Alaska-Canada links also exist in the field of communications. The chief one is a contract between British Columbia Telephone Company and ACS for use of a 240-voice channel tropospheric scatter microwave facility between Annette Island and Vancouver or Port Angeles, Washington, where it connects with the Bell System. The total number of messages presently is small: 6,443 in 1966.

3. FORECAST

Figure 2-12 summarizes "judgment" projections of employment. The table presents a preview of the region's development that is optimistic principally because it assumes the coming of an integrated forest products complex, probably at Juneau. The other principal sector of employment, government, has been projected to increase at different rates for the federal and state and local components--3 percent and 5 percent respectively, for the planning period with a "balloon" in the short term due to the

anticipated end of the Viet Nam war and a spurt of government expenditures to catch up with cuts made in Alaska. A basic assumption is continued federal interest in Alaska's development throughout the period comparable to the recent past. The government estimates could be upset, of course, by a national policy to downgrade Alaska's priority; but most recent studies (e.g., *Alaska Natural Resources and the Rampart Project* published last year by the Department of the Interior) recommend programs that could have positive effects on government employment in the region. In the study cited the Department of the Interior recommends sharply increased mineral study programs to be carried out by the Geological Survey and the Bureau of Mines. Of possibly greater impact in Southeastern in terms of government employment is the fisheries development programs suggested in the same publication which call for extension services, formation of a marketing cooperative, training of Alaskans in modern fishing, processing, and marketing techniques, and demonstration of improved methods, in addition to research and development work.¹⁷ The possibility of accelerated federal development programs such as those recommended in *Alaska Natural Resources and the Rampart Project* has been included in the high projection, which includes 150 additional employees over the likely level in the short term, 200 in the intermediate term, and 300 in the long term.

The fishery development projected for southeastern Alaska will require considerable government assistance. A small amount of additional employment from development of shrimp and bottomfish and a continuation of the trend to frozen salmon, say, in the range of 25 to 50 employees has been projected in the short- and intermediate-terms, with 200 in the long term. A lessening of federal support in exploratory fishing, assistance to pilot plants, and other areas could mean a significant reduction in the long-term employment potential, possibly by 50 percent, while increased government programs could add 100 employees each in the intermediate and long terms.

Alternative development possibilities in the forest products sector will have the greatest impact on the regional economy. If the huge timber sale now under option is completed and an integrated complex containing a pulp mill, plywood mill, and cant mill results, an estimated 1,100 new workers will be added in the intermediate and long term. If the complex is not built and the sale is broken up into a number of smaller sales, the minimum expansion would involve additions to existing mills resulting in an estimated 200 new employees in the short term and a similar increase in the intermediate and long terms.

Mineral industry employment is another area of highly volatile projections: A breakthrough in processing titaniferous iron ore could bring the large deposits into operation. If two of the iron deposits became operational and development of the Sumdum copper deposit and Brady Glacier nickel deposit were to take place, long-term employment might be four times

FIGURE 2-12

SUMMARY OF EMPLOYMENT PROJECTIONS, SOUTHEAST ALASKA

Employment Sectors	Short Term (To 1971)	Intermediate Term (To 1974)	Long Term (1975-1985)
Government	6,600	7,400	11,500
Manufacturing	3,200	4,300	4,500
Tourism	750	1,000	2,000
Minerals	---	---	500

Source: Author's computations.

the 500 projected from working the small high-grade iron-copper deposits and uranium deposits near Ketchikan, some development of limestone, and opening of certain gold deposits. Five hundred employees might be present in the intermediate term in the high projection. The most pessimistic prediction would be that the present situation of little or no minerals employment will continue.¹⁸

In summary, the "judgment" prospective for Southeast Alaska's population is: 52,600 in the short term; 57,700 in the intermediate term; and 74,100 by 1985. With the unfavorable economic events outlined previously, the prospective population levels would be 51,000, 52,900, and 60,000. The high prospective would be 54,200, 62,100, and 82,800.

FOOTNOTES

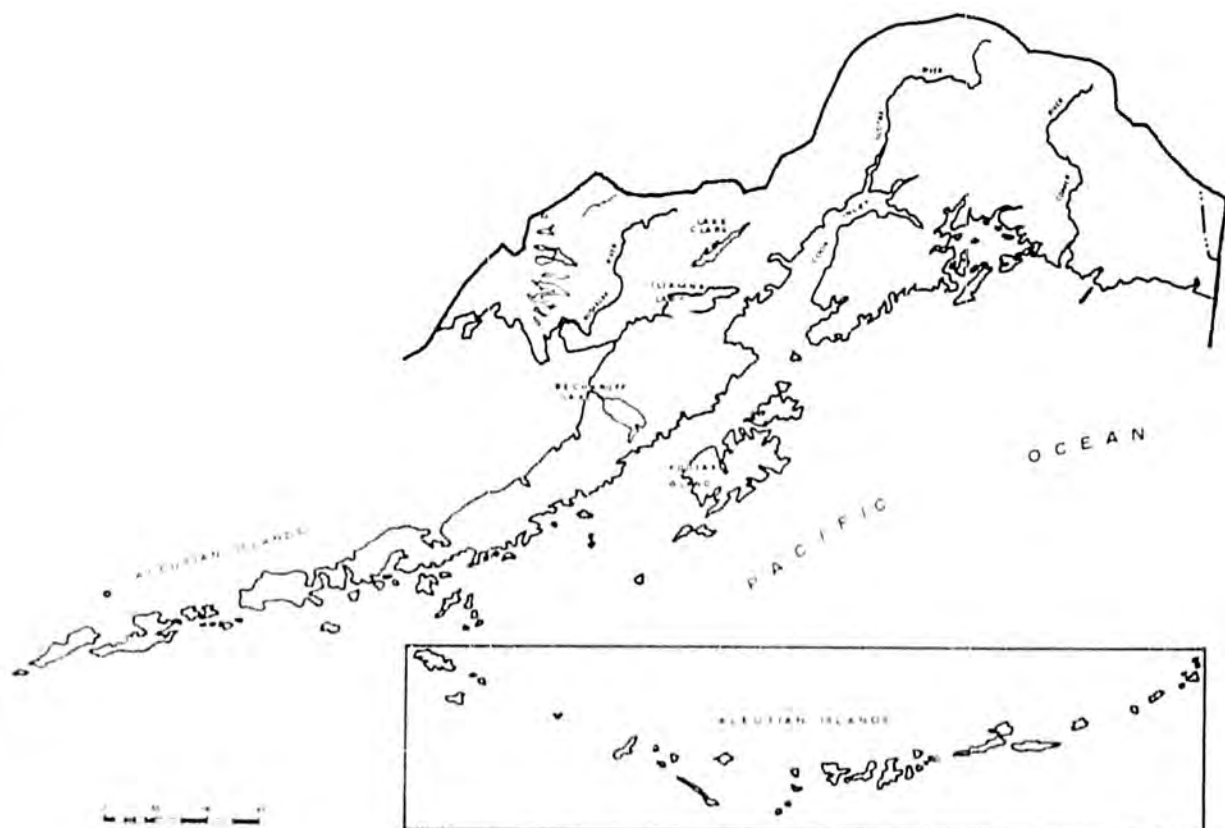
CHAPTER 2

1. Greater Juneau Borough, Planning and Zoning Department, *A Comprehensive Plan for the Development of the Greater Juneau Borough*, December 1966, p. 11.
2. Bureau of Indian Affairs, *Report of Labor Force Employment and Unemployment as of March 1967, Juneau District*.
3. The last section of this chapter summarizing projections of employment and population will go into more detail concerning various assumptions underlying government employment projections. However, it is expected that the rate of federal employment increase will be somewhat higher in the short term than the 3 percent expected for the whole planning period, assuming that the Viet Nam war ends and there is a spurt to catch up with programs presently affected by budget limitations.
4. Arlon R. Tussing, University of Alaska, *Alaska-Japan Economic Relations*, Institute of Social, Economic and Government Research, 1968, p. 26. One defect of this recommendation is that if the present market is monopsonistic in character there is no real assurance that the present buyer would not emerge as the major log exporter as well.
5. Quoted in *Seattle Post-Intelligencer*, December 6, 1967.
6. *Treasury Department Staff Report on the Pacific Northwest Log Export Problem*, pp. 8, 9. The Staff Report states that the Forest Service prohibition on log export from Alaska has not been successful because it has not led to shipment of lumber to the conterminous United States, but only crudely processed logs to Japan, and that the present allowable cut, even though very conservative, cannot be marketed, leading to loss through fire, insects, and mortality.
7. *Ibid.*, pp. 11-15.
8. *Forest Industries*, March 1968, "Log Exports--Pro and Con", Statements by William D. Hagenstein, executive vice president, Industrial Forestry Association, and A. Saheki, Kanematsu-Gosho (U.S.A.), Inc., pp. 34-36.
9. The estimate of loggers is based on the contract requirement of 175 million board feet per year for ten years. Mill employment is based upon present experience of the pulp mills and estimates for the associated processing.

10. Federal Maritime Commission, Bureau of Domestic Regulation, *Alaska Trade Study*, July 1967, I-4.
11. Planning and Zoning Department, Greater Juneau Borough, *Op. Cit.*, p. 19.
12. *Transportation and Economic Development In Alaska*, prepared by the Transportation Task Force of the Federal Field Committee for Development Planning in Alaska, Anchorage, Alaska, 1968, p. 161.
13. U. S. Department of the Interior, *Alaska Natural Resources and the Rampart Project*, 1967, Table 23.
14. U. S. Department of the Interior, Bonneville Power Administration, *Pacific Northwest Economic Base Study for Power Markets*, Vol. II, Part 6, "Forest Industries", pp. 82-83; Alaska Power Administration, *Industrial Electric Power Study, Phase I, Southeast Alaska*, unpublished study, June 30, 1967. The average lumber mill in Southeast Alaska is estimated to use only 34 kilowatt hours per 1,000 board feet cant production and plywood mills in the Pacific Northwest consumed 120 kilowatt hours per thousand square feet of plywood in 1962. Pulp mills producing through chemical processes generate their own power to a large extent.
15. U.S. Army Corps of Engineers, *Waterborne Commerce of the United States*, 1966, p. 153. The data do not include copper concentrates from the New Imperial Mine, which began shipping in 1967.
16. *Alaska-Northwest Canada Economic Activities, Part II*, prepared by George W. Rogers with Douglas N. Jones for the Federal Field Committee for Development Planning in Alaska, Anchorage, Alaska, 1968, p. 26.
17. *Alaska Natural Resources and the Rampart Project*, *op. cit.*, pp. 40, 42-43.
18. The prospectives outlined above have been translated into population estimates under certain assumptions: (1) The ratio of population to employment, which has remained at 2.7 to 1.0 from 1961 through 1966, would gradually decrease to 2.5 to 1.0 in the short term, 2.3 to 1.0 in the intermediate term, and 2.1 to 1.0 in the long term. The declining population-employment ratio is based on the assumptions that the rate of natural increase of non-Native population will decline to approximately 10 per 1,000 from the present 12 per 1,000; and that the Native rate of natural increase will continue to decline at the rapid rate of the 1960s, when it fell from 36 per 1,000 to 23 between 1961 and 1966, so that it will

decline to 12 per 1,000 by 1985. The underlying assumption regarding the non-Native population-employment ratio is that any increase in the fertility ratio would be offset by the more settled nature of the population whereby fewer dependents would be coming to join persons employed in resource-development industries. (2) Distributive and construction employment would be in a 1 to 1 ratio with primary employment during the planning period, slightly less than the 1961-66 level. Two-thirds of the government employment has been placed in the primary category, comprising the federal employees and part of the state sector. (3) The military sector will continue at 700 men with an assumed equal number of dependents.

SUBREGION II
Southcentral Alaska



CHAPTER 3

SOUTHCENTRAL ALASKA-REGION II

1. DIAGNOSTIC CHARACTERISTICS

The function of this section is to give the reader a rapid acquaintance with the key economic features of southcentral and southwestern Alaska and a glimpse of historical growth. It provides an outline of the backdrop against which assessments and forecasts will be made in Section 2 in analyzing this subregion. The important forces of population and labor force are treated at the outset followed by an aggregating of income and employment for these sectors. There is next presented a statistical and brief narrative profile of each of the eight sectors comprising the economic activity of the region. A discussion of the dynamics that link Region II with other regions (within and outside Alaska) concludes this section.

A. Population and the Labor Force

The study of an area's economy begins quite naturally with the population of the region, for it is because of people in their role as producers that economic activity is made possible, and it is for people in their role as consumers that economic activity is designed. The size of an area's population, the rate of growth, and the distribution of the population in the labor force, then, become central elements in an analysis of the economy's past, present, and future.

In analyzing the characteristics of the population in Region II it is useful to separate the population into three groups: Natives, non-Natives, and the military. The military during World War II and the Korean conflict was responsible for Region II's rapid population growth between 1940 and 1955. With the cutbacks in defense construction and personnel in 1955, the population of Region II declined, then grew at a slower rate in the 1960's as the level of military personnel stabilized.

Today the military makes up 13 percent of the population when in 1945 they made up 74 percent, so that while their significance is still considerable, it is nowhere what it was in the 1940's.

The Natives in Alaska typically have a higher rate of population growth than the rest of the Alaskan population. Region II in this respect seems to be no different from the rest of Alaska. The Native population in this region does have a slightly higher birth rate and death rate than the Natives in other regions; and, on balance, they have a higher natural rate of increase (birth - deaths) than in other regions. The Natives in Region II, however, are a much smaller percentage of the total population than in

other regions so that their high rates of growth do not seriously affect the overall pattern of population growth.

By far the largest number of people in Region II fall within the non - Native civilian class. This group is characterized by its youth, its high level of education and personal income, and its high but declining birth rate. In the Anchorage area, for example, where 82 percent of the people in Region II live, the birth rate has dropped from 34 per thousand per year in 1960 to 24 per thousand per year in 1966. People under 14 years of age made up 34 percent of the Anchorage area population in 1960 and 36 percent of Alaska in 1964. People over 65 make up only 1 percent of the population of the Anchorage area population, but in all of Alaska they make up 2.3 percent (and, in the U. S. as a whole, 9.2 percent).

Figure 3-1 shows the growth in population in the southcentral region since 1940. As can readily be seen population growth has been much slower in the 1960's than in the '50's and '40's. Net migration has had some impact on the region's population. On balance, this factor has been positive, adding more to population than taking away from it, but migration has been negative in those years in which employment opportunities have declined or living conditions (as in the earthquake) have been adverse.

(1) Education

Alaska, and in particular the southcentral region is favored with a population and labor force with a high level of educational attainment. In Region II, 81 percent of the population 25 years old and over had more than a grade school education in 1960. This compares with a figure of 61.4 percent in the U. S. and 73.6 percent in all of Alaska. The education level of a population is an important factor in any region's economic growth, and Region II's high level of educational attainment has had a decisive impact on the region's economic growth. But as might be expected, there is a great deal of variation in the educational status of different groups within the economy, and this poses difficult problems for the balanced growth of the region. As indicated, in Figure 3-2 those geographical regions that have a higher percentage of Natives in them reveal a much lower level of educational attainment. In Bristol Bay, for instance, almost one-fourth of the population over 25 has had no formal education whatsoever. Some improvement over the years has been made in raising the educational level of these neglected groups, but a great deal of work has yet to be done in this field. The pockets of illiteracy that exist today represent a serious underutilization of human resources. If these pockets can be removed in the near future, economic growth in the not-too-distant future will be much easier and much faster.

FIGURE 3-1
ESTIMATES OF TOTAL RESIDENT POPULATION
REGION II, 1940-1966
(in thousands)

JULY 1	TOTAL POPULATION	POPULATION MILITARY	POPULATION COMPOSITION	
			CIVILIAN NON-NATIVE	NATIVE
1940	19.4	.5	10.7	8.2
1950	64.4	18.5	37.9	8.0
1960	119.0	20.0	88.9	10.0
1961	126.4	20.0	95.9	10.5
1962	128.6	20.2	97.4	10.9
1963	133.6	20.2	102.0	11.3
1964	135.5	20.1	103.6	11.8
1965	144.4	20.7	111.5	12.1
1966	149.2	20.7	115.8	12.6

Source: George Rogers, *Alaska Regional Population & Employment*, 1967; and Alaska Department of Health & Welfare, *Alaska's Vital Statistics*, 1966.

Chapter 3-2

YEARS OF EDUCATION COMPLETED BY PERSONS OVER THE AGE OF 25
REGION II--1960

ELECTION DISTRICT										
YEARS OF SCHOOL	Cordova	Valdez	Palmer	Anchorage	Seward	Kenai	Kodiak	Aleutian Islands	Bristol Bay	Region II
0	1.8%	4.3%	.8%	.5%	.7%	2.2%	2.0%	13.6%	23.5%	1.7%
1 - 4	3.4%	2.7%	2.2%	9.6%	1.6%	3.0%	3.3%	7.2%	15.7%	2.1%
5 - 8	25.1%	22.6%	20.6%	13.3%	25.3%	22.7%	20.6%	25.3%	18.4%	16.0%
9 - 12	49.8%	48.2%	56.9%	59.0%	53.7%	52.4%	57.0%	48.4%	29.6%	56.6%
13+	19.7%	22.2%	19.3%	26.1%	19.2%	18.9%	17.0%	15.5%	12.8%	23.6%

Source: *Labor Market Area Profiles*, Alaska Department of Labor, Employment Security Division (1965).

(2) Population and Urbanization

Population in Region II was approximately 149,000 in 1966 with a civilian population of 128,300. A low estimate, assuming no net in-migration from other states, puts the population in Region II at 167,100 in 1970 and 179,100 in 1975.

The great majority of these people (82 percent) lived within the Anchorage area, and a sizeable percentage (36 percent) lived within the city of Anchorage (Figure 3-3). In recent years the population of the city of Anchorage has grown at approximately the same rate as Alaska as a whole so that, in 1966, 19.8 percent of Alaskans lived within the city--the same percentage as in 1960. But the population of the Anchorage *area* has grown much more rapidly than the rest of the state. In 1960, 38 percent of the state's population lived within the Anchorage area, in 1966 44 percent lived within these bounds; by 1967 this figure jumped to 48 percent.

This concentration of population in Anchorage and to some extent in Kenai is not entirely an unmixed blessing. For it means not only that economic development must proceed at an even more rapid pace in order to provide jobs for the increase in the work force but also that the city and borough governments must act to provide more schools, more roads, and more health and recreation facilities. And, as the experience of the rest of the nation suggests, as the economy advances, as personal incomes rise, people demand not only *more* roads and schools and sewers but *better* roads and *better* schools and *better* water systems. It is imperative, therefore, that Region II grow rapidly in order to provide jobs and a strong fiscal base upon which to finance the needed social expenditures.

The future population of a region is a function of the birth rate, the death rate, and the net migration into the region. The natural rate of increase (birth rate minus death rate) depends upon the age distribution of the population, its level of education and personal income, and the percentage of the population that is urban bound. The immigration into a region is influenced by the supply of "amenities of life" in the region, the cost of living, the level of income, and the employment opportunities relative to these characteristics in other regions. Knowledge of a region's economic growth and development and realistic assumptions as to how peoples' decisions to bear children and to relocate in response to economic changes are required for responsible predictions of population growth.

For the special case of Alaska and Region II much more work has to be done in analyzing how differences between regions affect migration. Region II's probable economic growth will doubtless attract many people into this area, but the magnitude of this migration cannot be predicted without making some assumption about the rate of economic growth in other regions. All indicators suggest that Region II will grow economically faster than the whole of Alaska and thereby exert some pull on the population centers of other regions. On the other hand if Region II's economic growth is slower

FIGURE 3-3
POPULATION OF ANCHORAGE, ALASKA
1920-1967

Census Year	Anchorage City Limits	Percent Change Since Previous Census	Anchorage Area	Percent Change Since Previous Census	Anchorage Area as Percent of Alaska Total	Alaska Total	Percent Change Since Previous Census
1920	1,856	--	NA	--	--	55,036	--
1929	2,277	+23	2,736	--	4.6	59,278	+8
1939	3,495	+53	4,229	+55	5.8	72,524	+22
1950	11,254	+222	32,060	+658	24.9	128,643	+77
1960	44,237*	+293	82,833	+158	36.6	226,167	+76
1967	53,000	+20	121,700	+47	44.1	276,000	+22

*Includes persons living in areas annexed by the city since the previous census.

Sources: The figures for 1920-60 are from the decennial reports of the U. S. Bureau of the Census. The figures for 1967 are computed from estimates made by the Anchorage Area Borough, and the State of Alaska.

than that of the U. S. or the western U. S. people in Alaska and Region II will be drawn to the continental U. S. On balance, then, whether net immigration is positive or negative depends critically upon what assumptions are made about *relative* rates of economic growth.

To adjust for the degree of variability in the migration factor, both a high and a low estimate for future population levels is presented in Figure 3-4. The low estimate which assumes no net immigration is based on a regional breakdown of the low projections of the Alaska population made by the Bureau of the Census. The high estimate assumes significant net-immigration in response to an intensification in federal programs involved in power, fisheries, minerals, and transportation development. Both high and low estimates assume gradually declining military force levels in Region II.

The population figures in Figure 3-4 were derived from figures presented in George Rogers' *Alaska Regional Population and Employment* and adjusted in the following manner. Population projections for Election Districts 14 and 15 were added to the figures for Rogers' "Southcentral Region" to obtain the projections for the Federal Field Committee's "Region II" as used in this study. The figures for the non-Native and Native populations in Election Districts 14 and 15 were derived by assuming that these two populations would grow at the same rate as their respective populations in the whole Southwestern region, so that if Natives in Election Districts 14 and 15 make up 31 percent of the Southcentral Native population in 1967, they will make up 31 percent of the Southcentral Native population in 1990; and if non-Natives make up approximately 55 percent in 1967, they will make up 55 percent of the non-Native population in 1990. Actually, the non-Native population has been growing slightly faster outside of Election Districts 14 and 15, so that the figures may overestimate the population figures. There is, however, no guarantee that the future will look like the past and in fact one could argue that the non-Native population will grow faster in Election Districts 14 and 15 than outside should there be substantial oil exploration and development in Bristol Bay, in which case the projections would underestimate the future population.

Native figures are based on the assumption (Rogers') that the Natives will increasingly come to participate in the expanding economic opportunities outside the Southwestern region and that the Natives will be provided with adequate birth control information and supplies. The validity of this assumption may be doubtful but it has been retained in this case because it does not seriously affect the results for Region II.

FIGURE 3-4
ESTIMATES OF TOTAL RESIDENT POPULATION
REGION II, 1970-2000
(in thousands)

JULY 1	TOTAL POPULATION	LOW ESTIMATE POPULATION COMPOSITION			JULY 1	TOTAL POPULATION	HIGH ESTIMATE POPULATION COMPOSITION		
		MILITARY	CIVILIAN				MILITARY	CIVILIAN	
			<u>Non-Native</u>	<u>Native</u>				<u>Non-Native</u>	<u>Native</u>
1970	167.1	20.8	132.2	14.1	1970	168.0	20.8	132.0	15.2
1975	179.1	20.2	143.0	15.9	1975	181.3	20.2	142.9	19.2
1980	190.6	19.7	152.0	17.9	1980	196.8	19.7	153.3	23.8
1985	203.7	19.7	164.0	20.0	1985	253.3	19.7	178.2	32.4
1990	216.0	19.7	174.2	22.1	1990	260.7	19.7	201.4	39.6
1995	229.8	19.7	185.4	24.2	1995	300.9	19.7	237.1	44.1
2000	242.6	19.7	196.8	26.1	2000	331.9	19.7	263.6	48.6

Source: George Rogers, *Alaska Regional Population and Employment*, 1967. Region II is equal to Rogers' Southcentral region plus election districts 14 and 15. The figures in this table are based on the assumption that election districts 14 and 15 will grow as fast as the rest of the Southwestern region of which they are a part.

FIGURE 3-5

LABOR FORCE PARTICIPATION--REGION II

YEAR	CIVILIAN POPULATION	WORKFORCE (EMPLOYED & UNEMPLOYED)	LABOR FORCE PARTICIPATION RATIO
1961	106.4	40,830	38.4
1962	108.3	42,092	38.9
1963	113.3	44,082	38.9
1964	115.4	46,359	40.2
1965	123.6	50,856	41.1
1966	128.4	53,395	41.6

Source: Population figures are from Figure 3-1.
Labor force figures are from *Workforce Estimates, 1961-1966*,
Alaska Department of Labor, Employment Security Division.

(3) Labor Force Participation

The labor force, like the rest of the population in Region II, is largely urban bound, young, and highly educated. Recalling that Region II is vast and diverse, there are several exceptions to this general rule. In the Aleutian Islands, for instance, the labor force is scattered in numerous small communities; in Bristol Bay a good part of the labor force relies on subsistence hunting and fishing. In both these areas the level of education is quite low, and a good deal of job training is needed to allow these people to compete in the commercial industrial workforce.

The size of the workforce is determined primarily by the size of the population, but it is affected by a great many other factors as well. The number of people willing to work depends upon the wage level, the attractiveness of the jobs, and the age and sex distribution of the population.

The percentage of the population in the labor force (the labor force participation ratio or LFPR) is higher in Region II than in the rest of Alaska but lower than in the rest of the United States. This percentage, however, has been definitely increasing since 1961 as inspection of Figure 3-5 reveals.

The explanation for this increase probably lies in the so-called "encouraged worker" effect--the idea that as employment opportunities and the wage rate increase, more and more people are encouraged to join the labor force because the attractiveness of employed work has increased relative to the attractiveness of nonmarket alternatives (leisure, fishing, and hunting.)

Despite a rather rapid increase in recent years, the rate still is considerably below figures for the United States as a whole. The smaller figure for Alaska is certainly understandable in view of its level of economic development compared with the rest of the nation and its traditional reliance on nonmarket activities like fishing and hunting. Still it is smaller than one might expect when one considers the age and sex distribution of the Alaska population compared with the rest of the nation. In general, (the LFPR will) be higher the larger is the percentage of males in the population and the smaller is the percentage of people in the retirement age group. Especially, in past years, Alaska has been noted for its dominance of prime-age males. This, on balance, would tend to make for a high LFPR and, over time, as the percentage of females grew to approximate that of males, a declining rate over time. That this has not been the trend over time indicates that the "encouraged worker" effect has been strong enough to dominate the effect caused by a change in the population distribution. In the absence of any migration into or out of the region, the increase in the LFPR in Region II means that employment opportunities must increase faster than the growth in population if unemployment is to be reduced. Otherwise the proportionately larger increases in the labor force

(with respect to the population) will be forced to join the ranks of the people looking for jobs.

Migration into or out of a region helps to equilibrate the supply of labor with the demand, since long-term migration patterns are largely in response to economic factors. But migration into Region II from other areas of Alaska and the U. S. may be much more influenced by the wage level than by the availability of jobs or the unemployment rate. If this is true, then in the presence of "sticky" wage rates in the downward direction, migration may fail to adjust the size of the population with the supply of jobs. Net immigration and the increase in the LFPR could mean that unemployment problems would persist even with moderate economic growth in the region.

B. Employment and Income

(1) Unemployment and Employment

Region II contains the bulk of the Alaskan population, the major city of Alaska, and relative to the remainder of the state, those structural elements which characterize a mature economy. Yet Region II is still plagued by the seasonality of employment and a high rate of unemployment that is characteristic of the rest of the economy.

The two major causes of seasonality of employment for the whole of Alaska--the severe climate and the seasonal fishing industry--are also the main contributors to the problem in Region II. The seasonality problem, of course, is not as severe in Region II as it is in the rest of the economy because of its milder climate and the importance of the distributive sector. Still, the seasonal unemployment is much above that of the rest of the nation's economy.

A useful measure of seasonality is obtained by taking the average employment as a base and comparing the seasonal highs and lows as a percent of that base. For Region II the 1966 high (July) was 117.8 percent and the low (February) was 90.1 percent. This compares with a range of 98.4 to 102.4 percent in the U. S. economy in 1960, and a range of 51.6 to 166.4 percent in all of Alaska in 1960.

Within Region II the Bristol Bay area suffers from the greatest degree of seasonality. Kodiak and the Aleutian Islands also have a very high index. Some improvement in the Kodiak area has come in recent years in the winter months as the crab industry has expanded. Employment in the Bristol Bay region in the near future will likely remain seasonal because of the importance of the fishing industry. Increases in tourism in both regions will add slightly to the seasonality, but the increase in timber operations on Kodiak and possible development of mining and petroleum in Bristol Bay may serve to counteract these tendencies.

The following table indicates the degree of seasonality in each of the election districts within Region II in 1966 and 1961.

FIGURE 3-6

SEASONALITY OF EMPLOYMENT 1966 and 1961 - REGION II

DISTRICT	<u>1966</u>		<u>1961</u>	
	HIGH	LOW	HIGH	LOW
Cordova	1.55	.57	1.55	.56
Valdez	1.34	.69	1.34	.68
Palmer	1.30	.80	1.30	.85
Anchorage	1.08	.91	1.05	.91
Seward	1.09	.88	1.09	.87
Kenai	1.31	.65	1.31	.65
Kodiak	1.25	.90	1.25	.89
Aleutian Islands	1.50	.75	1.50	.75
Bristol Bay	3.50	.59	3.50	.38

Source: *Workforce Estimates, 1961, 1966*, Alaska Department of Labor, Employment Security Division.

As can be seen by the above table there has been virtually no change in the seasonality of employment in Region II since 1961. Yet reducing the seasonality should be a major goal for the Alaskan economy because the seasonality of labor tends to raise the whole level of wage rates in the economy. Until the wage rates in Alaska become comparable with the rest of the U. S., the resulting high costs of production will continue to contribute toward putting Alaska at a competitive disadvantage with the rest of the nation. But until the seasonality of employment shows some decline, there will be only small gains in the reduction of labor costs.

Alaska and Region II are characterized by their high *unemployment* rates. As the figures in Figure 3-7 indicate, there has been little, if any, improvement in the unemployment rates since 1961. Some improvement, of course, came as the result of the construction activity following the Good Friday earthquake in 1964; but in 1966 as construction activity began to level off, the unemployment rate jumped back to its 1961 level.

Some caution must be observed in interpreting the unemployment rates as the figures for unemployment in Alaska cannot be taken as a precise measurement of the number of unemployed. The decision as to who is included in the count of the unemployed is always an arbitrary decision--and what may be a satisfactory criterion for some public policy concerns may not be satisfactory for other uses. In addition to the definitional problem, the job of actually enumerating the unemployed is especially difficult in Alaska where much of the labor force is scattered, and much of the employment is seasonal and subsistence.

Nevertheless, the unemployment figures provided by the Department of Labor are useful even though they may consistently understate (or overstate) the amount of unemployment. They are useful because a consistent measurement allows the determination of trends in unemployment over time and among regions. In most cases it is the trend and the relative differences rather than the absolute amount that is most important.

The high annual average unemployment rate is due in large part to the slack in wintertime demand for labor. The seasonality of labor demand, with its peak demand in the construction and fishing industries that draws people into the labor force in the summer months and leaves them without jobs in the winter, contributes to the high annual unemployment rate and, at the same time, puts very definite limits on possible future reductions in the unemployment rate. Unless the composition of the economy shifts towards industries that do not have seasonal production schedules, little success will be achieved in reducing the unemployment rate. In most areas the labor market is extremely tight in the summer months but the average annual rates of unemployment remain very high. In Cordova, Valdez, Kodiak, and Bristol Bay election districts in 1966, the monthly unemployment rate in the summer fell below 3.7 percent. Yet the annual average for these regions was over 9 percent.

FIGURE 3-7
BY ELECTION DISTRICT
REGION II CIVILIAN UNEMPLOYMENT
1961-1966
(Percent)

ELECTION DISTRICT	1961		1962		1963		1964		1965		1966	
	Annual Average	High Month	Annual Average	High Month	Annual Average	High Month	Annual Average	High Month	Annual Average	High Month	Annual Average	High Month
Cordova	11.5	31.7	10.1	24.6	12.3	24.8	12.7	23.0	8.4	15.8	13.7	24.6
Valdez	11.3	17.0	10.7	18.3	10.5	19.5	11.3	20.2	9.9	15.0	10.6	19.9
Palmer	17.1	23.9	16.7	27.1	16.4	22.9	11.9	22.8	14.0	20.9	14.3	22.6
Anchorage	6.8	9.8	6.5	9.8	6.9	9.6	5.7	9.6	6.2	7.8	7.1	9.9
Seward	9.2	12.8	9.6	15.1	9.7	15.6	14.8	18.0	16.5	24.7	17.3	33.3
Kenai	16.3	30.5	14.7	26.7	16.8	24.5	14.7	28.0	12.0	21.3	11.7	19.6
Kodiak	7.3	9.8	6.9	9.8	7.7	12.6	8.3	18.8	5.9	7.7	6.5	11.2
Aleutian Islands	7.9	10.5	7.5	11.6	7.6	14.7	8.8	16.2	10.0	16.4	7.7	11.8
Bristol Bay	7.9	26.2	10.4	31.1	13.1	25.7	12.2	30.8	9.8	28.9	10.9	31.3
Region II	8.2		8.0		8.5		7.6		7.5		8.2	

Source: *Workforce Estimates, Alaska, 1961-1966*, Alaska Department of Labor, Employment Security Division.

FIGURE 3-8
SUMMARY OF EMPLOYMENT ..JUN 11, 1961-1966

	1961		1962		1963		1964		1965		1966	
	No. Employed	% of Total	No. Employed	% of Total	No. Employed	% of Total	No. Employed	% of Total	No. Employed	% of Total	No. Employed	% of Total
Nonag. Wage & Salary Emp. *	31,591	100.0	32,799	100.0	34,355	100.0	36,624	100.0	40,380	100.0	42,404	100.0
Mining	612	1.9	744	2.2	744	2.3	734	2.0	722	1.8	1,043	2.5
Contract Construction	2,225	7.0	2,448	7.4	2,346	6.8	3,825	10.4	4,203	10.4	3,988	9.4
Manufacturing	2,503	7.9	2,515	7.7	2,623	7.6	2,314	6.3	2,862	7.0	3,123	7.4
Transportation, Comm. & Utilities	3,312	10.5	3,253	10.0	3,145	9.1	3,018	8.2	3,330	8.2	3,344	7.9
Trade	4,706	15.0	4,938	15.9	5,149	15.0	5,286	14.1	6,223	15.4	6,866	16.2
Fin., Ins., & Real Estate	950	3.0	1,083	3.3	1,149	3.3	1,279	3.5	1,490	3.7	1,513	3.6
Services & Misc.	3,328	10.5	3,343	10.2	3,765	11.0	4,123	11.2	4,622	11.4	5,048	11.9
Government	13,955	44.3	14,1	44.1	15,384	44.8	16,045	43.8	16,928	41.9	17,479	41.2
				% Change from 1961		% Change from 1962		% Change from 1963		% Change from 1964		% Change from 1965
				.3		0.1		-0.3		-0.2		0.7
				.4		-0.6		-1.3		--		-1.0
				-.2		--		-0.9		0.2		.4
				-.5		-0.9		-0.6		--		-0.3
				--		--		0.2		1.0		.8
				.3		--		0.2		.2		-0.1
				-.3		0.9		-1.0		.2		.5
				-.2		0.7				-1.9		-0.7

* Percent totals may not add in detail due to rounding.

Source: *Workforce Estimates* Alaska Department of Labor, Employment Security Division, 1961-1966.

Seasonality of employment does not necessarily adversely affect the economic welfare of a region. Housewives and students may temporarily join the labor force, migrant labor may enter a given area, work in the fish canneries or on the construction crews then willingly return to their normal activities when the season ends. These mutually beneficial arrangements do exist in the labor market areas of Region II; the laborforce does significantly contract during slack periods. But these contractions are not enough to eliminate the problem of unemployment.

The employment figures represent people who do not want to leave the labor force, who do not view their summer jobs as temporary. In short, the seasonality of employment does adversely affect the welfare of the people living in Region II. The problem is made even more serious by the fact that the unemployment is not rotated; it is not shared equally by all members of a community but rather tends to fall on the same people over long periods of time.

A major question is whether the economy will grow in a way that will solve the problem of seasonal fluctuations. Solving the problem requires the kind of growth that does not simply reinforce the existing seasonal fluctuations. Among other things, seasonality tends to condition a way of life that frustrates attempts to break the fluctuations. In the fish processing industry, for example, some firms are reporting difficulty in extending their production periods because the laborforce, conditioned to years of just summer employment, is initially unwilling to work longer periods of the year.

Seasonality of employment is not the only reason for unemployment in Region II. The areas of Palmer, Seward, Kenai, and Anchorage are less influenced by this factor than are the regions of Kodiak and Bristol Bay; and yet Palmer, Seward, and Kenai have unemployment rates over 11 percent. In these areas unemployment is due to a lack of aggregate demand, insufficient information in the job market, and a lack of the requisite training, education, and job skills in the labor force. Unemployment represents a very heavy burden that an unacceptably large number of people have to bear. The unemployment rate in Palmer, for example, is serious; but Palmer's high unemployment rate coupled with its relatively high level of income may be more "acceptable" than Bristol Bay's lower unemployment rate but relatively low level of income.

Employment in Region II is summarized in the following three tables. Relative to the rest of Alaska, the service, trade, and finance sectors employ proportionately more people than the manufacturing and transportation sectors. The dependence of Region II on distributive and service employment indicates that Region II is in a more advanced stage of development than the rest of Alaska, but comparisons between Region II and the U. S. indicate that the former's development is built on a rather shallow base (Figure 3-9). The government sector accounts for 41 percent of the employment in Region II, with only 16 percent in the U. S.

FIGURE 3-9

EMPLOYMENT BY SECTOR AS A PERCENTAGE OF
TOTAL NON-AGRICULTURAL CIVILIAN EMPLOYMENT FOR
REGION II, OTHER REGIONS AND THE U.S.-1966
(in percent)

	REGION II 1966	REGION I, III, IV, V 1966	U.S. 1966
Government	41.2%	43.5%	16.0%
Wholesale and Retail Trade	16.2	12.7	22.0
Services	11.9	9.1	12.6
Construction	9.4	6.1	5.3
Transportation, Communications and Public Utilities	7.9	12.9	7.4
Manufacturing	7.4	11.5	30.7
Finance, Insurance, & Real Estate	3.6	2.9	4.7
Mining	2.5	1.3	1.3
TOTAL	100%	100%	100%

Source: *Workforce Estimates, 1966* Alaska Department of Labor,
Employment Security Division.

FIGURE 3-10
INDEX OF GROWTH IN EMPLOYMENT IN REGION II
BY SECTOR, 1961-1966

Sector	B*
Government	.72
Wholesale and retail trade	.76
Services	1.04
Construction	1.23
portation	0
Manufacturing	.43
Finance	1.34
Mining	1.95

$$\frac{\Delta \text{employment (1961-1966)}}{\text{employment (1961)}}$$

*Where B=

$$\frac{\Delta \text{A.G.P. (1961-1966)}}{\text{A.G.P. (1961)}}$$

Source: *Workforce Estimates*, 1961-1966 Alaska Department of Labor, Employment Security Division and *An Aggregate Income Model of a Semi-autonomous Alaska Economy* by Bradford H. Ford, Federal Field Committee for Development Planning In Alaska, 1967.

The manufacturing industries provide only 7.2 percent of the employment in Region II while in the U. S. these industries account for 30.7 percent of the employment. Region II has, so to speak, "skipped" the secondary state of development so that today it has a well-developed and growing primary sector (basic extractive industries) and growing tertiary sector (distributive and service industries), but a very modest and slowly growing manufacturing sector.

The growth in employment in each sector since 1961 is given in index form in Figure 3-10. The index is an elasticity measure that compares the percentage rate of growth in each sector with the percentage rate of growth of Alaska Gross Product (AGP).

As the elasticity measure indicates, growth since 1961 has been quite rapid in the mining sector despite the declining demand for coal. The slack in the coal industry has been more than taken up by the rapid increases in the production of oil and gas in the Cook Inlet basin.

In the period 1961-1966, finance and construction also grew rapidly in employment. Much of the increase in construction came after the 1964 earthquake as each community rapidly mobilized to restore what had been destroyed. The boom in construction maintained itself well into 1966. In 1967 construction activities began to taper off in many communities, but this slack was taken up by the boom in construction in the Kenai area.

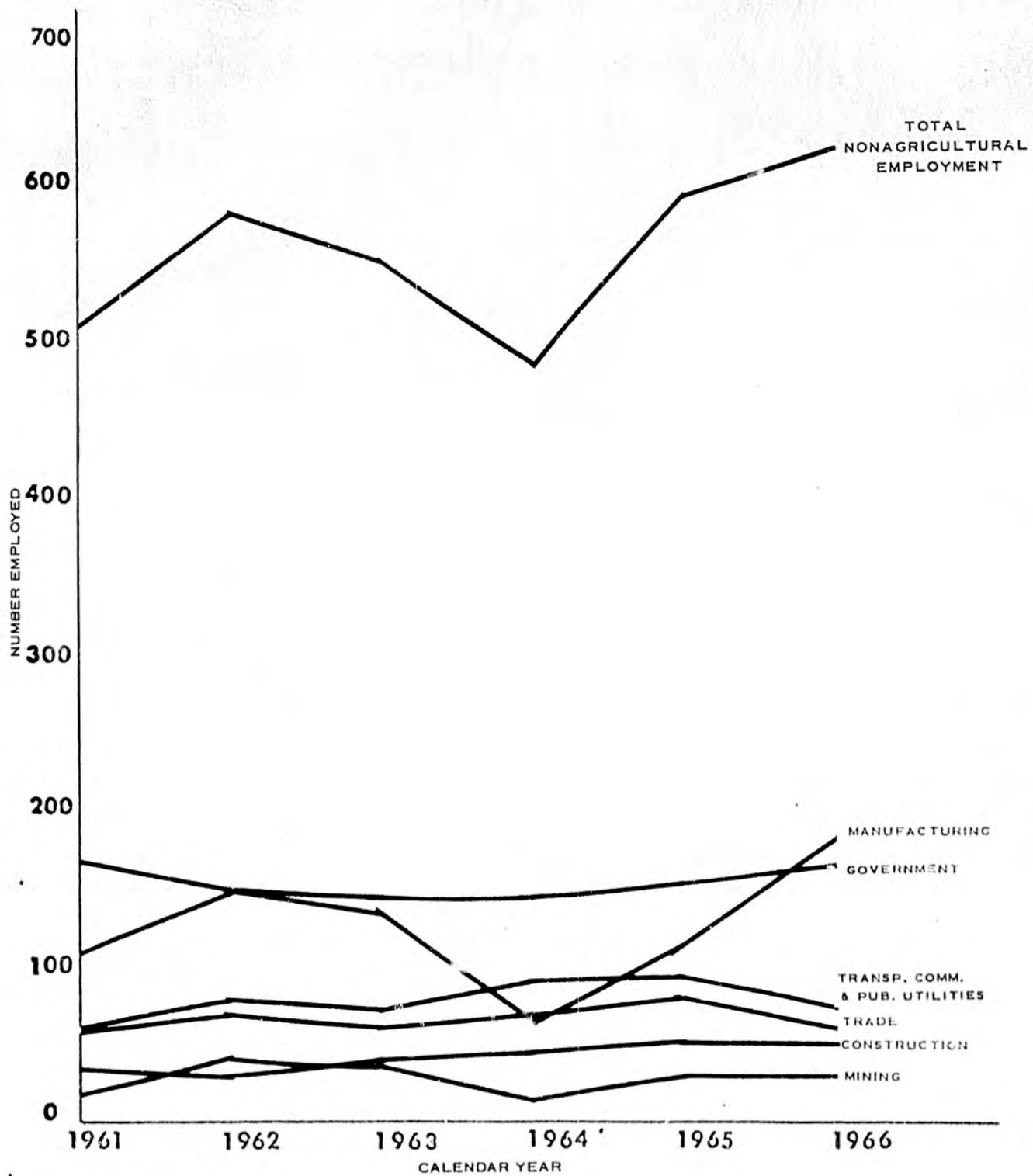
Growth in the manufacturing sector has been slow and will continue to be slow as long as the price structure continues to put Alaska at a competitive disadvantage with the rest of the U.S. As a result of the high cost of the factors of production in Alaska relative to costs in competing manufacturing areas, many resources are extracted from Alaska, shipped to other areas to be processed, then shipped back to Alaska for retail sale. If Alaska can beat down this high price structure--and some gains can be made simply by promoting competition in all markets--economic growth in the future will be much easier.

(2) District Characteristics

The charts and narrative in the section that follows provide a brief summary of the employment characteristics of each election district. The districts within Region II heavily influence and are influenced by the economic activities in the Anchorage and Kenai election districts. As such, the individual subregions are best handled by discussing all of them as a single economic unit rather than individually. For this reason the summary of each subregion is made appropriately brief. However, the Aleutian Islands election district is a somewhat special case due to the substantial military presence there. Because of its unique features a somewhat extended discussion of the Aleutian Islands election district is used to conclude this section.

FIGURE 3-11

CORDOVA-McCARTHY (ELECTION DISTRICT NO. 7)
EMPLOYMENT BY SECTOR, 1961-1966



Source: Figure 3-12.

FIGURE 3-12

EMPLOYMENT CORDOVA ELECTION DISTRICT, 1961-1966^b

EMPLOYMENT SECTOR	1961		1962		1963		1964		1965		1966	
	NO.	% OF	NO.	% OF	NO.	% OF	NO.	% OF	NO.	% OF	NO.	% OF
	EMP'D.	TOTAL	EMP'D.	TOTAL	EMP'D.	TOTAL	EMP'D.	TOTAL	EMP'D.	TOTAL	EMP'D.	TOTAL
Total Nonagr. Wage & Salary Employment ^c	520	100.0	593	100.0	551	100.0	493	100.0	603	100.0	632	100.0
Mining	21 ^a	4.0	43	7.3	35 ^a	6.2	13 ^a	2.6	30 ^a	5.0	30 ^a	4.7
Contract Construction	33 ^a	6.3	30 ^a	5.1	41	7.3	45 ^a	9.1	51	8.5	50	7.9
Manufacturing	167	32.2	152	25.6	135	24.1	62 ^a	12.6	112 ^a	18.6	186 ^a	29.4
Trans., Communications, & Pub. Utilities	64	12.3	80	13.5	72	12.8	93	18.9	96	15.9	72	11.4
Trade	60	11.5	69	11.6	62	11.1	66	13.4	80	13.3	66	10.4
Finance, Ins. & Real Est.	4 ^a	0.8	4 ^a	0.7	4 ^a	0.7	4 ^a	0.8	4 ^a	0.6	4 ^a	0.6
Services	61	11.7	65	11.0	65	11.6	65 ^a	13.2	75 ^a	12.4	61	9.7
Government	110	21.1	150	25.3	147	26.2	145	29.4	155	25.7	163	25.8

^aEstimated figures necessitated by disclosure regulations.^bBy old election districts.^cPercentage totals may not add in detail due to rounding.Source: Derived from *Revised Workforce Estimates*, Alaska Department of Labor, Employment Security Division.

(a) Cordova-McCarthy

The economy of the Cordova-McCarthy area is based on the harvesting, canning, and packaging of seafoods. Employment in the fishing industry is seasonal and cyclical. The introduction of shellfish harvesting and processing has added some wintertime employment and dampened the seasonal fluctuations, but the cyclical nature of the employment remains as the result of the historically generated replacement cycles.

Seasonality in manufacturing has also been dampened to some degree by the stability of employment in federal government jobs; the cyclical fluctuations, in recent years, have been moderated by a steady succession of construction jobs resulting from urban renewal projects, and the rebuilding of the harbor and the airport. The 1968 fire that destroyed the canning operations leaves the future of fish processing in Cordova uncertain.

Tourism has had a small impact on the economy of this area, and the significance of this industry should increase in the future as the number of tourists coming to Alaska increases. The eventual completion of the Copper River highway will allow Cordova to draw a greater share of the increased tourist traffic into the Southcentral region.

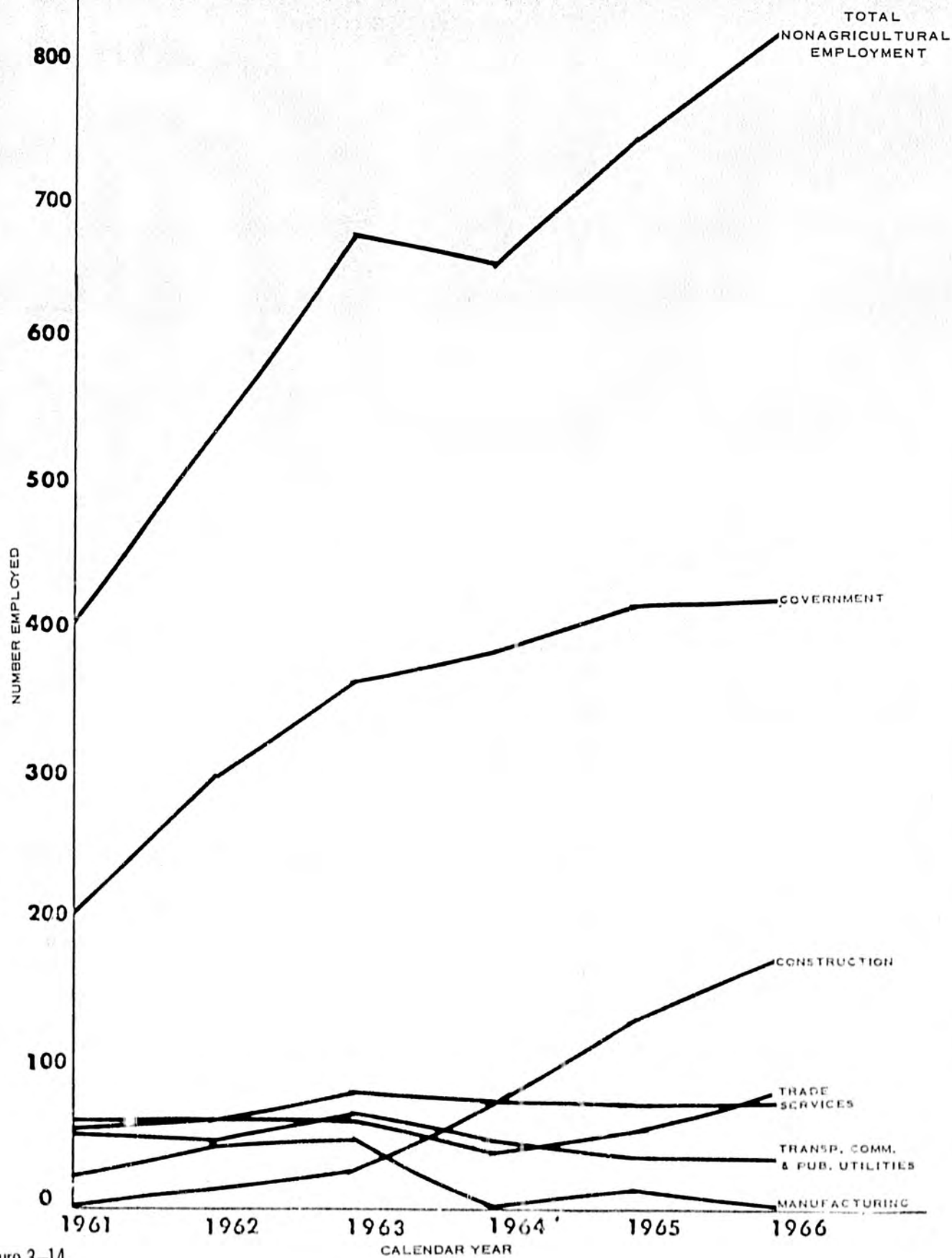
(b) Valdez-Chitina-Whittier

The economy of the Valdez area is a diverse one. Employment comes from subsistence hunting and fishing, commercial fishing and fish canning, timber operations (in Whittier) tourism and the federal government. The latter employs people in the operation of air and highway transportation systems. In addition, a number of military personnel are stationed in the area.

The Valdez area is becoming a popular recreation area for the residents of Anchorage and tourists from other states. Part of the employment in trade and services is a result of this tourist traffic.

Construction work on highway projects and the rebuilding of the city of Valdez in a new location has added significantly to employment in election district 8; but the recent completion of some construction contracts has re-enforced the steady out-migration of citizens, continuous from 1960.

FIGURE 3-13
VALDEZ-CHITNA-WHITTIER (ELECTION DISTRICT NO. 8)
EMPLOYMENT BY SECTOR, 1961-1966



Source: figure 3-14.

FIGURE 3-14

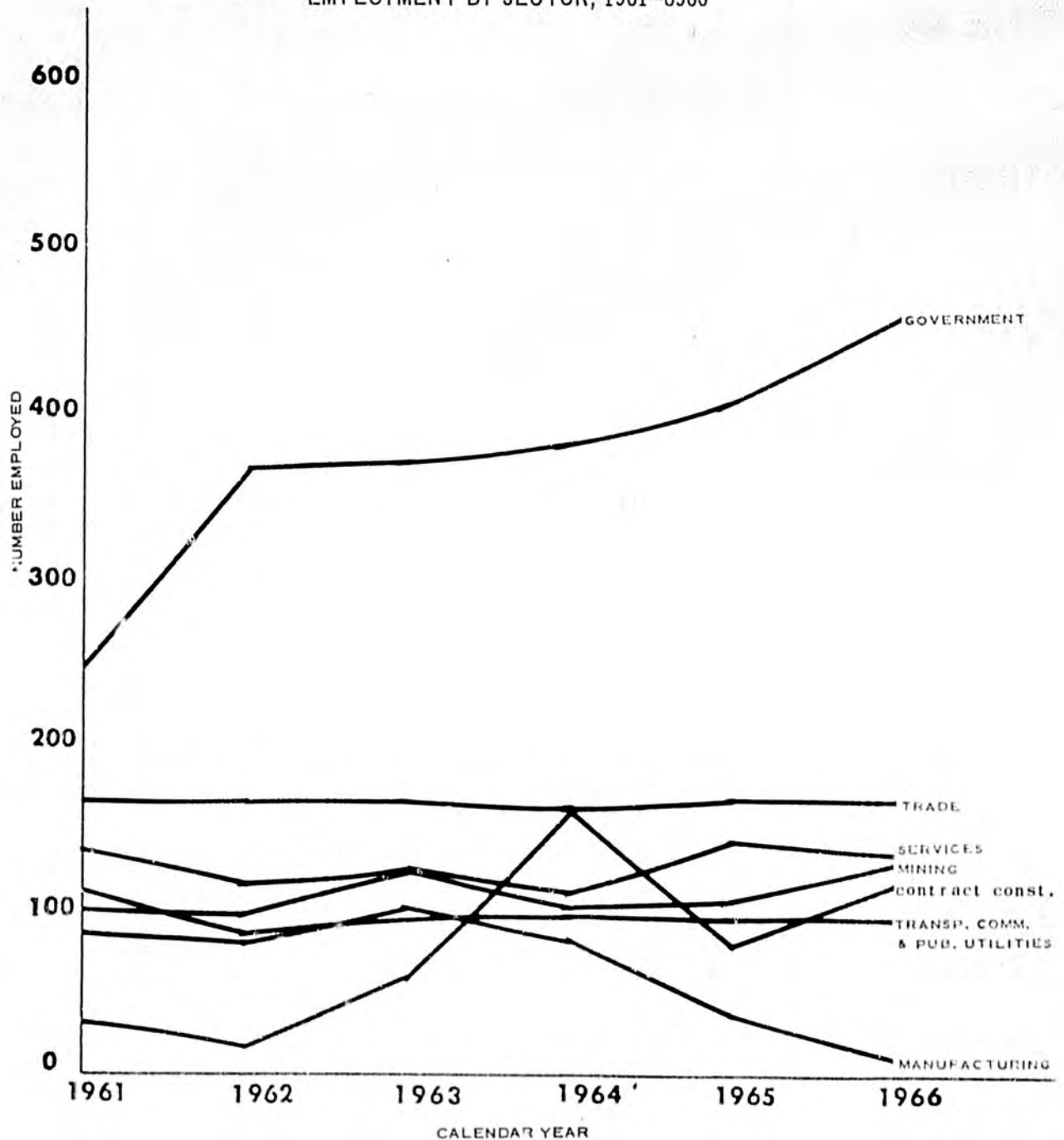
EMPLOYMENT VALDEZ ELECTION DISTRICT, 1961-1966^b

EMPLOYMENT SECTOR	1961		1962		1963		1964		1965		1966	
	NO. EMP'D.	% OF TOTAL	NO. EMP'D.	% OF TOTAL	NO. EMP'D.	% OF TOTAL	NO. EMP'D.	% OF TOTAL	NO. EMP'D.	% OF TOTAL	NO. EMP'D.	% OF TOTAL
Total Nonagr. Wage & Salary Employment ^c	412	100.0	545	100.0	683	100.0	666	100.0	752	100.0	822	100.0
Mining	0	0	1 ^a	0.2	0 ^a	0	10 ^a	1.5	0 ^a	0	0 ^a	0
Contract Construction	4 ^a	0.9	14	2.6	29	4.2	75 ^a	11.3	135	18.0	188	22.9
Manufacturing	25	6.0	48	8.8	52	7.6	5 ^a	0.8	11 ^a	1.5	6 ^a	0.7
Trans., Communications, & Pub. Utilities	54	13.1	48	8.8	69	10.1	49	7.4	41	5.5	38	4.6
Trade	63	15.3	62	11.4	71	10.4	46	6.9	56	7.4	81	9.9
Finance, Ins. & Real Est.	3 ^a	0.7	2 ^a	0.4	4 ^a	0.6	13 ^a	1.9	13 ^a	1.7	4 ^a	0.5
Services	56	13.6	63	11.4	84	12.3	74	11.1	72	9.6	75	9.1
Government	207	50.2	307	56.3	374	54.8	394	59.2	424	56.4	430	52.3

^aEstimated figures necessitated by disclosure regulations.^bBy old election districts.^cPercentage totals may not add in detail due to rounding.Source. Derived from *Revised Workforce Estimates*, Alaska Department of Labor, Employment Security Division.

FIGURE 3-15

PALMER-WASILLA-TALKEETNA (ELECTION DISTRICT NO. 9)
EMPLOYMENT BY SECTOR, 1961-1966



FIGURES FOR TOTAL NONAGRICULTURAL EMPLOYMENT (NOT SHOWN)
ON GRAPH ARE PRESENTED IN FIGURES 3-16

SOURCE: FIGURE 3-16

FIGURE 3-16

EMPLOYMENT PALMER ELECTION DISTRICT, 1961-1966^b

EMPLOYMENT SECTOR	1961		1962		1963		1964		1965		1966	
	NO.	% OF EMP'D. TOTAL	NO.	% OF EMP'D. TOTAL	NO.	% OF EMP'D. TOTAL	NO.	% OF EMP'D. TOTAL	NO.	% OF EMP'D. TOTAL	NO.	% OF EMP'D. TOTAL
Total Nonagr. Wage & Salary Employment ^c	849	100.0	942	100.0	1,025	100.0	1,136	100.0	1,082	100.0	1,138	100.0
Mining	98 ^a	4.0	97	10.3	120 ^a	11.7	100 ^a	8.8	103 ^a	9.5	129 ^a	11.3
Contract Construction	26	6.3	14	1.5	57	5.6	160 ^a	14.1	78	7.2	107	9.4
Manufacturing	82	32.1	78	8.3	100 ^a	9.8	80 ^a	7.0	35 ^a	3.2	10 ^a	0.9
Trans., Communications, & Pub. Utilities	103	12.3	82	8.7	91	8.9	95	8.4	94	8.7	95	8.3
Trade	162	11.5	163	17.3	162	15.8	159	14.0	164	15.2	166	14.6
Finance, Ins. & Real Est.	2 ^a	0.8	27	2.9	3 ^a	0.3	49	4.3	60 ^a	5.5	32 ^a	2.8
Services	130	11.7	114	12.1	120	11.7	110 ^a	9.7	140 ^a	12.9	140	12.3
Government	246	21.1	367	39.0	373	36.4	383	33.7	408	37.7	459	40.3

^aEstimated figures necessitated by disclosure regulations.^bBy old election districts.^cPercentage totals may not add in detail due to rounding.Source: Derived from *Revised Workforce Estimates*, Alaska Department of Labor, Employment Security Division.

(c) Palmer-Wasilla-Talkeetna

Farming dominates the economy of the Palmer area, creating direct employment in the production of milk, potatoes, feed grains, and fresh vegetables, as well as related employment in the processing of these agricultural products. In recent years there has been an increase in employment by the federal government of personnel concerned with the administering of agricultural projects but a corresponding decline in employment in processing and marketing of agricultural crops due to the shift to Anchorage of some of these facilities.

Coal, gold, and limestone mining add to the employment in election district 9. In recent years there has been a decline in the military and civilian demand for coal due to the lower price for equivalent units of natural gas resulting in the closing of the coal mine near Jonesville in 1968. In future years, copper mining could become profitable in the Palmer area if government policy with respect to export of this mineral is favorable; but its impact on the economy would be small.

Several saw mills operate in the area and a recent sale of timber promises an increase in employment though not enough to counteract the downward trend in manufacturing that has prevailed since 1963.

Tourism is the only sector of the economy that will show any significant gain in the next few years, for demand conditions in all other sectors are expected to be stable.

(d) Anchorage

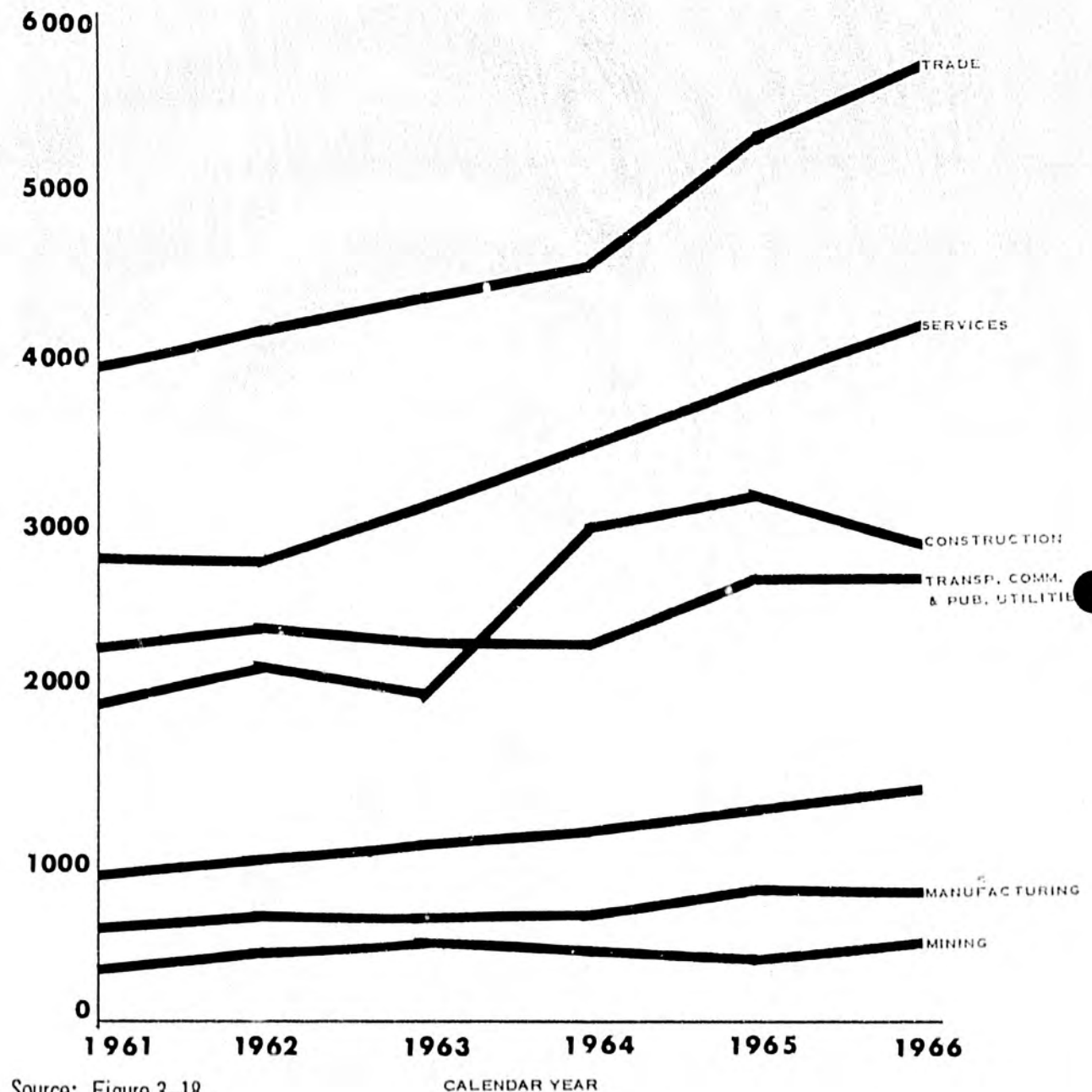
All sectors of the Anchorage economic community are on the upswing (Figure 3-16). Even construction, which shows a tapering off from 1965 to 1966, picked up again in 1967 in response to the increase in building projects and work on the Minnesota by-pass.

The federal government is the backbone of the Anchorage economy with the large number of military personnel stationed in the area and the many government agencies that service the whole of Alaska. In addition to this direct employment, government payrolls add significantly to the demand for food, clothing, and housing and hence to the derived demand for employment in the production and sale of these goods.

Anchorage, however, is more than the governmental service center for Alaska. Anchorage is the hub of Alaska's transportation system, the center for manufactured goods distribution, the finance and real estate capital of Alaska, and the supply center for the oil and gas industry.

Anchorage is favored by a relatively low unemployment rate, a low seasonal employment index, and a relatively low consumer price index. These

FIGURE 3-17
ANCHORAGE (ELECTION DISTRICT NO. 10) EMPLOYMENT
SECTOR, 1961 TO 1966



FIGURES FOR GOVERNMENT EMPLOYMENT AND TOTAL NONAGRICULTURAL
EMPLOYMENT (NOT SHOWN) ON GRAPH ARE PRESENTED IN FIG. 3-18