



REVIEW OF BUSINESS AND ECONOMIC CONDITIONS

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ESTIMATED GROSS STATE PRODUCT FOR ALASKA

This Review presents a breakdown by industry of the estimated gross state product for Alaska. Gross state product or GSP is the total market value of all the goods and services produced in the state for a given period. The estimated GSP presented here provides a new way of measuring both volume and value of production in the state, and the results should prove valuable to economists, businessmen, and others who have an interest in the behavior of the state's economy. Use of an estimated GSP to measure Alaska production is similar to the way gross national product is used to measure total United States' production.*

Estimated GSP gives us the most complete measure of economic activity in Alaska. It differs from other measurements previously available because estimated GSP is based on a wider range of information sources and makes use of census data. Also, unlike previously available measures, the estimated GSP provided here has been adjusted to reflect "constant dollar" values (based on the 1958 dollar).

* However "gross national product" is not strictly analogous since it is not confined to production within the confines of a geographic boundary; GNP may also include production of U.S. owned industries in other countries. Gross state product as used here is confined to production within the boundaries of the state.

Estimating the Gross State Product

Table 1 compares 1961 with 1972 estimated GSP, as well as the gross product for each industrial sector. These figures were derived by either of two alternative ways: (1) by figuring how much the total value of a given industry's output exceeds the cost of materials used in production, or (2) by figuring the sum of the industry's payments for employee compensation, profits, and other such production costs as indirect business taxes and depreciation. The type of information available determined which method we used to estimate the gross product for a given industry. Calculated by either method, however, the sum of the gross products of all Alaska industries equals the state's output or GSP.

Price Deflators

When measured by current prices, many of the changes in gross product since 1961 have resulted from changes in price rather than changes in actual production. To measure and compare actual production, gross product was adjusted to compensate for price changes. This was done by dividing industry gross product (as shown in table 2) by the "price deflators" shown in tables 1 and 3.

Because employee compensation constitutes the major component of gross product in most in-

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dustries, the bulk of the price deflators was derived by comparing changes in the cost of labor based on average annual employee earnings. In a few industries, the price deflators were calculated directly from changes in output prices.

“Real” GSP (adjusted for price changes) was estimated by dividing the GSP (at each year’s prices) for each industry by a price deflator for that industry. The results are the “constant dollar” gross products shown in table 4. These show what the value of each year’s Alaska product would have been if valued at 1958 *national* prices instead of 1958 *Alaska* prices. In other words, we adjusted the GSP for changes both in Alaska prices and for differences between prices in Alaska and the rest of the United States. The resulting GSP estimates provide consistent indicators of the physical volume of production in the major industrial sectors of Alaska.

Sources

In order to make use of the maximum amount of available information, the gross product estimates were derived from the largest possible variety of sources. The two major sources were the wage and salary estimates prepared by the Alaska Department of Labor and the industry data collected by the U.S. Bureau of the Census. The information concerning Alaska industry was obtained from the census of manufactures, commercial fisheries, mineral industries, construction industries, and government. In addition to these sources, some of the data was taken from Alaska personal income estimates and from the U.S. industry gross product estimates prepared by the U.S. Department of Commerce.

More complete information on data sources is contained in the appendix. The appendix also pro-

vides a detailed outline of the procedures used in computing the various gross product estimates.

Alaska Gross Product, 1961-1972

As table 1 shows, the Alaska GSP for 1972 is estimated to have been \$2.4 billion. GSP has grown at an average rate of nearly 10 percent a year since 1961. However, a large part of this growth represents price increases, not gains in actual production. The GSP deflator (a general price index for Alaska output) increased at nearly 4 percent a year and real output grew at 5.7 percent a year between 1961 and 1972.

Within the context of the relatively rapid growth in the total economy, there were significant changes in the industrial composition of production (see figure 1). The most striking change was in the mining sector, which grew quite rapidly due to expanded petroleum activities. The mining sector increased its share of total real output from 5.4 percent in 1961 to 17.5 percent in 1972. The other sectors experiencing above-average real growth were state and local government; transportation, communications, and public utilities; and trade, finance, and services. It is interesting to note that those last two industrial groups, the so-called support sectors, produced about 45 percent of total real GSP in 1972, and they accounted for more than half of the real growth between 1961 and 1972.

In contrast to the support sectors, the renewable resource-based industries grew at only 0.4 percent per year from 1961 to 1972, and their share of real GSP fell from 13.8 percent to 7.8 percent. Thus, two traditional Alaska industries, fisheries and forest products, have contributed very little to the real growth of the Alaska economy since statehood. Another traditional sector contributing little to growth was the federal government. Although the federal sector remains an important component of the Alaska economy, its growth in current prices was only moderate and, in real terms, its gross product actually declined slightly between 1961 and 1972. As a result, the federal government’s share of real GSP was cut almost in half over that period.

Changes in Alaska Production, 1971-1972

In 1972, Alaska GSP increased by 7 percent

TABLE 1
ALASKA GROSS PRODUCT, 1961 AND 1972

	GROSS PRODUCT IN CURRENT DOLLARS (Millions of Dollars at Current Prices)		GROSS PRODUCT IN CONSTANT DOLLARS (Millions of 1958 Dollars at Average U.S. Prices)		PRICE DEFLATORS (1958 U.S. Prices = 100)			
	1961	1972	1961	1972	1961	1972		
	Average Annual Rate of Change 1961-1972		Average Annual Rate of Change 1961-1972		Average Annual Rate of Change 1961-1972			
All Industries, Total GSP	863.3	2416.3	683.6	1253.0	126.3	192.8	5.7%	3.9%
Renewable Resource Industries	102.5	166.2	94.3	98.2	108.7	169.2	0.4	4.1
Agriculture	1.4	1.4						
Fisheries	74.0	94.8	71.1	57.0	104.1	166.3	-2.0	4.4
Forest Products	27.1	70.0	23.2	41.2	116.8	169.9	5.4	3.5
Mining (Including Petroleum)	37.1	224.0	36.9	219.1	100.5	102.2	17.6	0.2
Contract Construction	81.7	271.2	33.6	61.4	243.2	442.0	5.6	5.6
Manufacturing*	8.3	26.8	6.8	14.8	122.6	181.2	7.3	3.6
Transportation	47.0	120.9	42.5	90.2	110.6	134.0	7.1	1.8
Communications	65.4	104.9	60.8	94.2	107.5	111.4	4.1	0.3
Public Utilities	12.7	48.9	11.9	40.7	106.5	120.0	11.8	1.1
Trade	98.2	288.2	68.0	153.1	144.4	188.2	7.7	2.4
Wholesale	31.6	89.3	24.8	58.1	127.5	153.8	8.0	1.7
Retail	66.6	198.9	43.2	95.0	154.0	209.3	7.4	2.8
Finance, Insurance, and Real Estate	48.9	186.2	40.2	102.4	121.7	181.8	8.9	3.7
Services	57.5	187.2	32.4	80.1	177.5	233.7	8.6	2.5
Government	304.0	791.8	256.2	288.8	118.7	265.0	1.4	7.6
Federal	248.5	490.6	225.1	212.5	110.4	230.9	-0.5	6.9
State and Local	55.5	301.2	31.1	86.3	178.4	349.0	9.7	6.3

* Other than lumber, wood, and paper products or food (fish) processing

(see figure 2 and table 2). However, the price deflator is estimated to have increased by nearly 10 percent, so real GSP actually fell by 2.7 percent. The major factor causing this was the continuing decline in mining (petroleum) activity. The gross product in mining fell by 11 percent in current prices and by 20 percent in constant dollars. The resource-based industries other than mining also showed a substantial drop in output: 5 percent in

current prices and 16 percent in real terms. On the other hand, the support industries, state and local government, and contract construction all displayed strong growth, both in current prices and in real terms. The federal government had a decline in real output (employment), but this was more than offset by the increase in average wages paid, so output in current prices actually rose 5 percent.

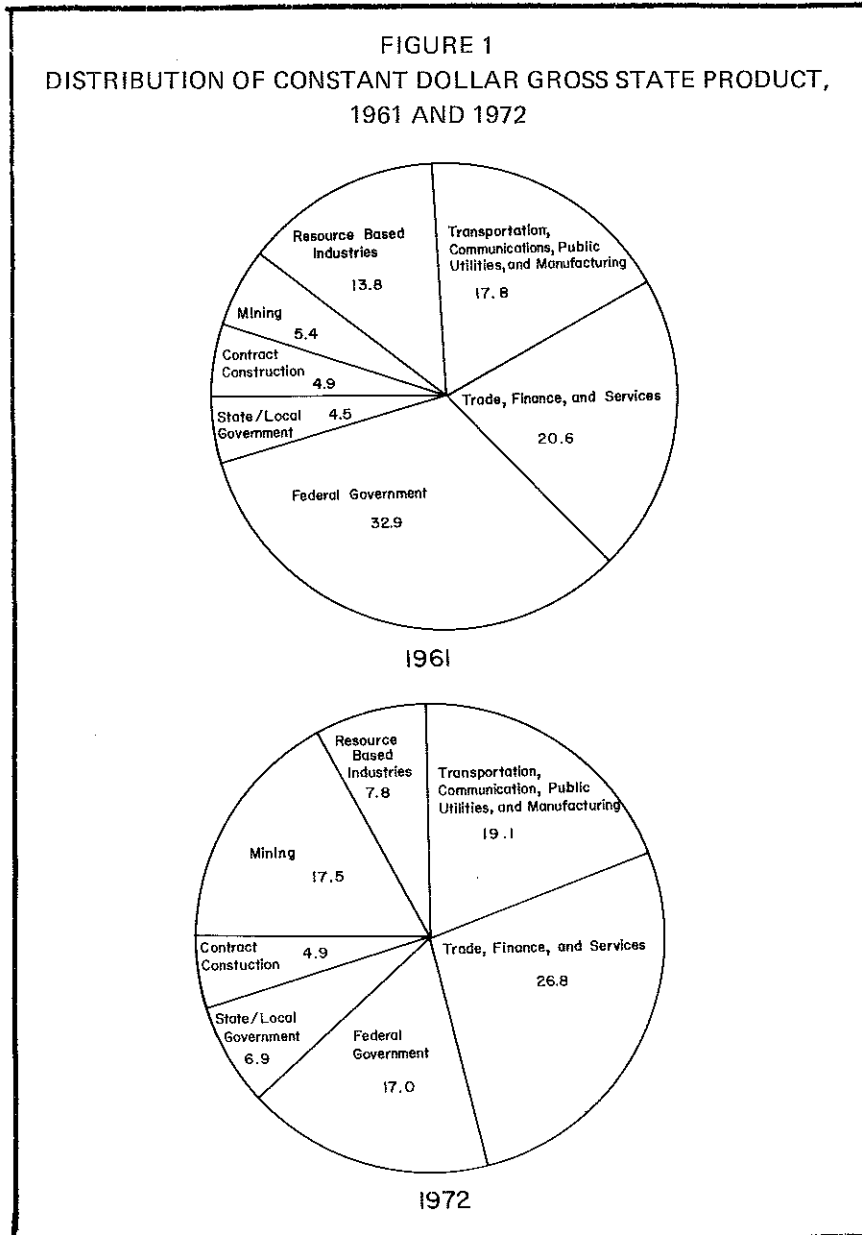


FIGURE 2
CHANGE IN ALASKA GROSS PRODUCT, 1971-1972
(Percent)

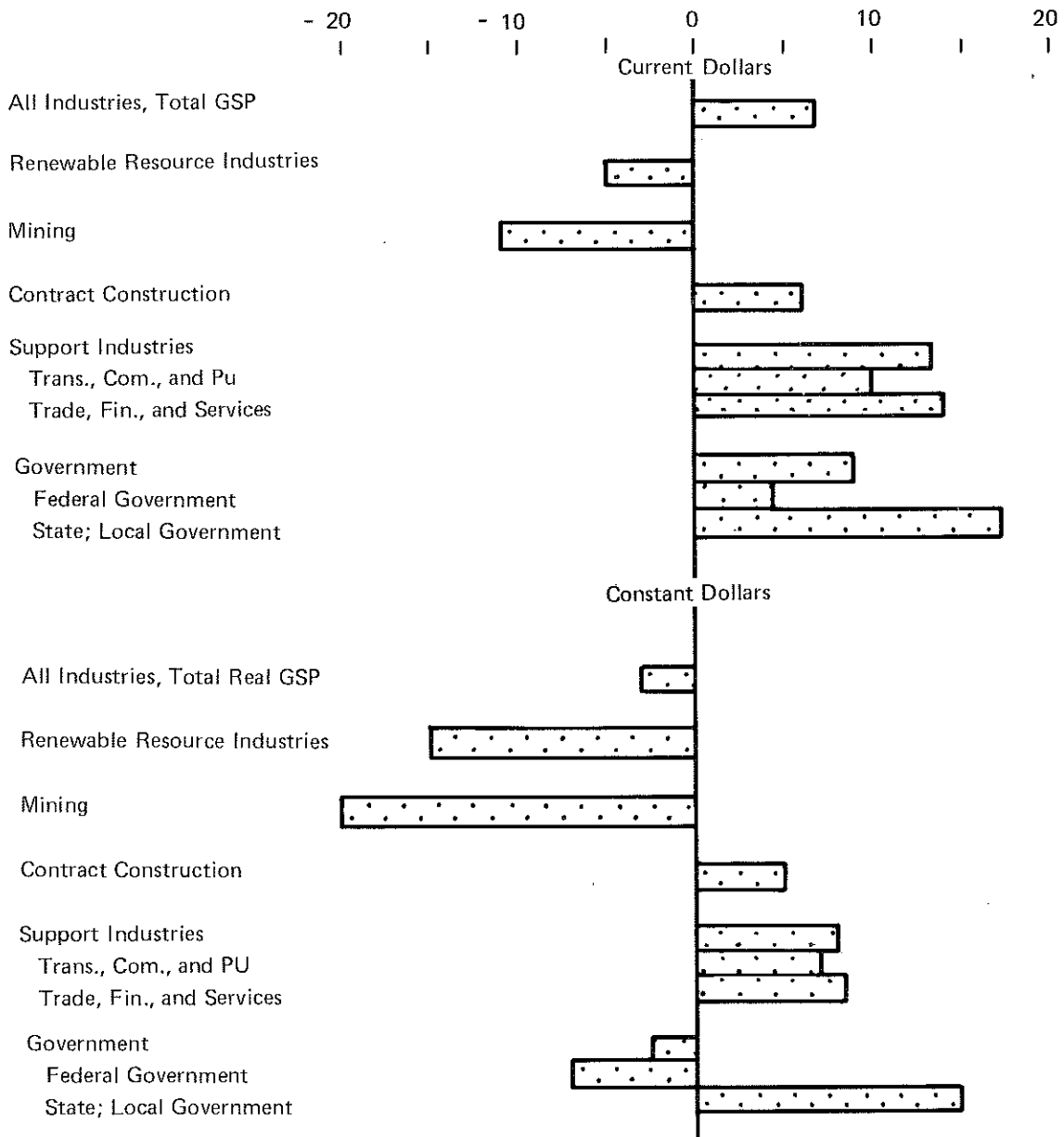


TABLE 2
ALASKA GROSS PRODUCT IN CURRENT DOLLARS BY INDUSTRY, 1961-1972
(Millions of Dollars)

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
ALL INDUSTRIES	863.3	902.2	944.1	1089.3	1189.6	1305.1	1468.0	1662.4	1921.1	2116.6	2257.3	2416.3
AGRICULTURE, FORESTRY AND FISHERIES	27.5	34.2	27.7	33.3	40.6	47.1	28.0	46.0	39.0	55.8	49.4	50.0
ALL INDUSTRIES EXCEPT AGRICULTURE, FORESTRY AND FISHERIES	835.8	868.0	916.4	1056.0	1149.0	1258.0	1440.0	1616.4	1882.1	2060.8	2207.9	2366.3
Employee Compensation	582.7	603.8	640.9	729.7	785.6	848.5	947.2	1035.2	1184.7	1339.9	1461.8	1602.3
Indirect Business Tax	51.5	54.0	55.0	57.6	69.0	76.6	83.7	96.7	114.8	131.5	145.2	157.2
Other Factor Payments	201.6	210.2	220.5	268.7	294.4	332.9	409.1	484.5	582.6	589.4	600.9	606.8
MINING	37.1	41.9	44.4	46.3	46.6	65.9	158.3	220.1	334.4	301.3	250.6	224.0
Employee Compensation	12.6	13.8	13.8	13.7	14.4	19.1	30.7	41.3	61.2	56.4	47.5	42.7
Indirect Business Tax	2.7	3.2	3.4	3.4	3.6	5.3	9.5	13.6	19.9	19.2	16.6	14.5
Other Factor Payments	21.8	24.9	27.2	29.2	28.6	41.5	118.1	165.2	253.3	225.7	186.5	166.8
Metal Mining	3.5	3.2	2.6	1.8	2.3	2.5	2.1	1.8	2.0	3.4	2.8	1.9
Employee Compensation	3.1	2.9	2.3	1.6	2.0	2.2	1.8	1.7	1.9	3.2	2.4	1.8
Indirect Business Tax	.4	.4	.3	.2	.3	.3	.3	.2	.2	.4	.3	.2
Other Factor Payments	0	0	0	0	0	0	0	0	0	0	0	0
Oil and Gas	28.6	33.4	36.9	39.1	38.1	57.2	150.8	213.5	328.1	293.5	242.1	215.9
Employee Compensation	6.7	7.9	8.7	9.1	8.9	13.4	25.9	36.9	56.9	50.7	41.9	37.4
Indirect Business Tax	2.2	2.6	2.9	3.0	3.1	4.8	9.0	13.2	19.6	18.7	16.1	14.1
Other Factor Payments	19.7	22.9	25.3	27.0	26.1	39.0	115.9	163.4	251.6	224.1	184.1	164.4
Other Mining	5.0	5.3	4.9	5.4	6.2	6.2	5.4	4.8	4.3	4.4	5.7	6.2
Employee Compensation	2.8	3.0	2.8	3.0	3.5	3.5	3.0	2.7	2.4	2.5	3.2	3.5
Indirect Business Tax	.1	.2	.2	.2	.2	.2	.2	.2	.1	.1	.2	.2
Other Factor Payments	2.1	2.1	1.9	2.2	2.5	2.5	2.2	1.9	1.8	1.8	2.3	2.5
CONTRACT CONSTRUCTION	81.7	83.3	89.9	137.3	155.9	158.5	170.7	180.0	211.3	223.8	254.3	271.2
Employee Compensation	50.6	51.6	55.9	84.8	96.1	97.7	104.5	109.9	129.8	138.7	158.0	170.6
Indirect Business Tax	1.7	1.8	1.8	2.6	3.1	3.2	3.3	3.7	3.9	4.3	5.0	5.5
Other Factor Payments	29.4	29.9	32.2	49.9	56.7	57.6	62.9	66.4	77.6	80.8	91.3	95.1
MANUFACTURING	83.3	79.0	78.0	95.2	105.2	116.9	103.5	125.7	111.6	144.5	149.7	143.0
Employee Compensation	43.8	45.8	48.6	50.8	60.6	62.5	62.5	70.5	77.5	94.3	98.0	102.2
Indirect Business Tax	9.3	7.9	7.8	7.9	10.7	11.0	9.3	10.4	10.7	13.5	13.8	13.4
Other Factor Payments	30.2	25.3	21.6	36.5	33.9	43.4	31.7	44.8	23.4	36.7	37.9	27.4
Food and Kindred Products	47.9	38.3	33.1	46.5	52.0	62.7	44.1	60.6	37.6	59.3	60.1	46.2
Employee Compensation	22.1	20.7	20.6	20.3	26.7	27.1	22.5	26.1	26.8	35.5	35.6	34.5
Indirect Business Tax	8.1	6.5	6.3	6.3	9.1	9.4	7.6	8.3	8.4	10.8	11.0	10.5
Other Factor Payments	17.7	11.1	6.2	19.9	16.2	26.2	14.0	26.2	2.4	13.0	13.5	1.2
Lumber and Wood Products	7.3	8.0	10.0	11.3	13.3	16.5	23.5	25.1	26.5	31.3	32.0	34.7
Employee Compensation	5.6	6.2	7.9	8.7	10.4	12.9	18.5	19.8	21.0	24.7	25.4	27.7
Indirect Business Tax	.2	.2	.3	.3	.3	.4	.6	.7	.7	.8	.8	.9
Other Factor Payments	1.5	1.6	1.8	2.3	2.6	3.2	4.4	4.6	4.8	5.8	5.8	6.1
Paper and Allied Products	19.8	23.1	24.9	26.1	27.3	25.2	23.6	24.7	27.8	31.4	32.7	35.3
Employee Compensation	9.7	11.3	12.2	12.8	13.4	12.4	11.6	12.2	13.7	15.7	16.4	17.7
Indirect Business Tax	.3	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.6
Other Factor Payments	9.8	11.4	12.3	12.9	13.5	12.4	11.6	12.1	13.7	15.2	15.8	17.0
Other Manufacturing	8.3	9.6	10.0	11.3	12.6	12.5	12.3	15.3	19.7	22.5	24.9	26.8
Employee Compensation	6.4	7.6	7.9	9.0	10.1	10.1	9.9	12.4	16.0	18.4	20.6	22.3
Indirect Business Tax	.7	.8	.8	.9	.9	.8	.7	1.0	1.2	1.4	1.5	1.4
Other Factor Payments	1.2	1.2	1.3	1.4	1.6	1.6	1.7	1.9	2.5	2.7	2.8	3.1
TRANSPORTATION	47.0	49.9	52.8	56.8	63.5	66.1	74.9	77.9	100.8	106.3	107.3	120.9
Employee Compensation	34.1	35.5	37.0	39.1	41.8	43.9	51.5	55.2	73.2	80.1	76.4	84.8
Indirect Business Tax	4.1	3.8	3.3	3.2	3.6	3.8	4.1	4.4	5.6	6.4	8.3	9.7
Other Factor Payments	8.8	10.6	12.5	14.5	18.1	18.4	19.3	18.3	22.0	19.8	22.6	26.4

Table 2 (continued)

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
TRANSPORTATION (cont.)												
Trucking and Warehousing	9.7	10.8	11.5	13.5	16.7	13.2	17.2	18.6	26.7	30.6	27.2	28.6
Employee Compensation	6.5	7.2	7.6	9.1	11.0	8.8	12.0	12.8	18.8	21.0	19.3	20.7
Indirect Business Tax	.7	.8	.9	1.0	1.2	1.0	1.0	1.1	1.5	1.8	1.6	1.6
Other Factor Payments	2.5	2.8	3.0	3.4	4.5	3.4	4.2	4.7	6.4	7.8	6.3	6.3
Water Transportation	9.3	10.0	10.4	10.1	9.2	12.2	12.3	11.7	10.4	11.0	10.2	12.8
Employee Compensation	8.0	8.8	8.7	8.3	7.6	9.9	10.2	9.5	9.0	9.4	9.0	11.1
Indirect Business Tax	.4	.3	.3	.2	.2	.3	.3	.3	.3	.3	.4	.5
Other Factor Payments	.9	.9	1.4	1.6	1.4	2.0	1.8	1.9	1.1	1.3	.8	1.2
Air Transportation	23.8	24.6	26.3	28.8	32.5	34.9	38.8	40.2	55.4	54.9	58.7	68.5
Employee Compensation	16.6	16.4	17.6	18.7	19.9	21.5	24.9	28.0	39.8	43.0	40.5	45.6
Indirect Business Tax	2.7	2.3	1.7	1.7	1.8	2.0	2.2	2.3	3.0	3.3	5.2	6.4
Other Factor Payments	4.5	5.9	7.0	8.4	10.8	11.4	11.7	9.9	12.6	8.6	13.0	16.5
Other Transportation	4.2	4.5	4.6	4.4	5.1	5.8	6.6	7.4	8.3	9.8	11.2	11.0
Employee Compensation	3.0	3.1	3.1	3.0	3.3	3.7	4.4	4.9	5.6	6.7	7.6	7.4
Indirect Business Tax	.3	.4	.4	.3	.4	.5	.6	.7	.8	1.0	1.1	1.2
Other Factor Payments	.9	1.0	1.1	1.1	1.4	1.6	1.6	1.8	1.9	2.1	2.5	2.4
COMMUNICATIONS												
Employee Compensation	65.4	61.5	61.1	58.9	62.1	67.4	64.3	67.4	68.6	71.3	98.1	104.9
Indirect Business Tax	30.9	27.9	26.8	26.4	27.6	30.1	28.4	29.9	31.6	34.6	47.3	51.3
Other Factor Payments	8.5	8.0	7.6	7.0	7.5	7.2	8.0	8.0	8.2	8.9	12.2	12.6
Other Factor Payments	26.0	25.6	26.7	25.5	27.0	30.1	27.9	29.5	28.8	27.8	38.6	41.0
PUBLIC UTILITIES												
Employee Compensation	12.7	15.5	17.6	20.4	23.7	24.9	27.9	31.0	33.5	36.5	43.8	48.9
Indirect Business Tax	4.2	5.0	5.6	6.6	7.6	8.0	9.0	10.1	11.1	12.7	14.8	16.5
Other Factor Payments	1.3	1.7	1.8	2.0	2.5	2.5	3.0	3.5	3.8	4.4	5.3	5.8
Other Factor Payments	7.2	8.8	10.2	11.8	13.6	14.4	15.9	17.4	18.6	19.4	23.7	26.6
TRADE												
Employee Compensation	98.2	100.1	104.5	113.5	131.8	147.3	165.5	184.3	215.7	241.1	263.9	288.2
Indirect Business Tax	57.2	57.1	60.6	65.5	76.3	85.1	96.4	106.8	126.3	142.9	154.7	172.1
Other Factor Payments	14.4	16.1	16.5	17.5	21.1	24.9	27.8	32.9	39.2	45.4	50.6	56.5
Other Factor Payments	26.2	26.9	27.4	30.5	34.4	37.3	41.3	44.6	50.2	52.8	58.6	59.6
Wholesale Trade	31.6	29.1	29.7	33.7	37.8	45.1	50.3	56.0	70.0	79.0	82.2	89.3
Employee Compensation	17.5	15.7	16.2	18.5	20.7	24.5	27.9	30.5	38.4	44.0	45.3	50.0
Indirect Business Tax	6.6	6.7	6.7	7.3	8.7	10.6	11.8	13.7	17.1	19.7	21.5	23.4
Other Factor Payments	7.5	6.7	6.8	7.9	8.4	10.0	10.6	11.8	14.5	15.3	15.4	15.9
Retail Trade	66.6	71.0	74.8	79.8	94.0	102.2	115.2	128.3	145.7	162.1	181.7	198.9
Employee Compensation	39.7	41.4	44.4	47.0	55.6	60.6	68.5	76.3	87.9	98.9	109.4	122.1
Indirect Business Tax	7.8	9.4	9.8	10.2	12.4	14.3	16.0	19.2	22.1	25.7	29.1	33.1
Other Factor Payments	19.1	20.2	20.6	22.6	26.0	27.3	30.7	32.8	35.7	37.5	43.2	43.7
FINANCE, INSURANCE AND REAL ESTATE												
Employee Compensation	48.9	56.8	64.8	73.2	86.7	96.0	94.7	101.7	113.8	138.3	157.4	186.2
Indirect Business Tax	10.3	11.7	13.5	15.3	17.7	19.6	19.8	22.3	25.4	31.3	35.6	43.2
Other Factor Payments	7.8	9.6	10.8	11.9	14.4	16.2	16.3	17.4	20.4	25.7	29.3	34.4
Other Factor Payments	30.8	35.5	40.5	46.0	54.6	60.2	58.6	62.0	68.0	81.3	92.5	108.6
SERVICES												
Employee Compensation	57.5	63.0	62.7	69.9	78.3	84.9	96.5	109.7	126.8	144.1	160.0	187.2
Indirect Business Tax	35.0	38.4	38.5	43.0	48.3	52.4	60.7	70.6	83.0	95.3	106.7	127.1
Other Factor Payments	1.7	1.9	2.0	2.1	2.5	2.5	2.4	2.8	3.1	3.7	4.1	4.8
Other Factor Payments	20.8	22.7	22.2	24.8	27.5	30.0	33.4	36.3	40.7	45.1	49.2	55.3
Hotels, Motels, and Lodges	-	-	6.6	7.3	9.6	11.4	12.5	12.4	13.6	15.0	16.8	18.5
Employee Compensation	-	-	3.9	4.4	5.7	6.6	7.3	7.3	8.3	9.2	10.5	11.9
Indirect Business Tax	-	-	.5	.5	.7	.8	.8	.8	.9	1.1	1.2	1.3
Other Factor Payments	-	-	2.2	2.4	3.2	4.0	4.4	4.3	4.4	4.7	5.1	5.3
Personal Services	-	-	6.1	6.4	6.7	7.3	7.6	8.6	8.7	9.5	10.2	10.7
Employee Compensation	-	-	3.5	3.6	3.9	4.2	4.4	5.0	5.2	5.7	6.1	6.4
Indirect Business Tax	-	-	.2	.2	.2	.2	.2	.3	.3	.3	.4	.4
Other Factor Payments	-	-	2.4	2.6	2.6	2.9	3.0	3.3	3.2	3.5	3.7	3.9

TABLE 3
 PRICE DEFLATORS FOR ALASKA GROSS PRODUCT BY INDUSTRY
 (1958 Prices = 100 for U.S. Average)

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
ALL INDUSTRIES	126.3	128.1	130.2	139.6	142.8	145.0	146.2	150.5	152.7	164.0	175.3	192.8
AGRICULTURE, FORESTRY, AND FISHERIES	88.9	101.5	97.1	94.9	117.0	111.1	124.0	153.9	156.3	148.6	161.1	246.1
MINING	100.5	99.5	96.5	93.0	95.3	89.8	87.7	91.9	92.2	94.2	91.7	102.2
Metal Mining	100.0	89.3	92.0	90.4	89.0	102.9	60.6	79.8	80.1	91.3	73.1	76.0
Oil and Gas	97.5	97.0	94.1	89.7	90.7	85.7	87.2	91.5	91.7	93.6	91.3	101.7
Other Mining	122.3	128.9	122.3	129.5	142.7	142.7	129.6	118.9	182.6	186.0	133.4	142.8
CONTRACT CONSTRUCTION	243.2	255.2	263.7	303.3	295.6	333.8	352.0	371.3	394.3	409.9	436.8	442.0
MANUFACTURING	118.7	119.0	121.7	123.0	127.4	127.1	128.7	133.0	140.6	145.5	148.8	154.3
Food and Kindred Products	119.3	117.0	115.7	118.9	124.0	119.8	116.5	119.4	121.6	127.2	128.5	125.9
Lumber and Wood Products	134.9	143.7	141.9	151.4	148.6	153.5	169.7	178.2	185.1	199.4	195.1	207.5
Paper and Allied Products	111.1	110.1	117.0	115.2	117.2	122.5	119.1	127.0	127.7	130.0	138.6	144.2
Other Manufacturing	122.6	135.0	138.7	139.1	149.6	149.5	138.6	150.0	159.2	175.1	180.0	181.2
TRANSPORTATION	110.6	113.9	113.5	114.1	113.6	108.7	109.5	107.2	112.6	118.5	129.9	134.0
Trucking and Warehousing	108.2	112.8	116.3	120.1	120.6	124.2	125.9	130.2	142.0	141.2	144.2	144.7
Water Transportation	111.5	115.1	118.1	116.0	120.4	120.6	136.3	138.1	134.9	145.7	149.0	158.2
Air Transportation	108.2	111.5	104.9	105.9	102.2	95.0	92.5	86.8	94.1	97.8	112.8	119.5
Other Transportation	129.6	131.2	172.5	165.2	191.0	170.3	175.9	207.0	202.9	222.2	227.5	219.5
COMMUNICATIONS	107.5	107.0	107.5	108.4	108.3	109.2	109.8	109.7	111.1	110.9	109.9	111.4
PUBLIC UTILITIES	106.5	105.6	107.9	107.5	107.1	108.2	110.7	113.2	112.4	115.7	116.8	120.0
TRADE	144.4	144.2	146.4	151.1	154.7	156.9	160.8	166.2	172.3	175.6	181.1	188.2
Wholesale Trade	127.5	120.4	122.4	126.8	127.1	132.0	131.6	135.3	141.8	145.0	147.5	153.8
Retail Trade	154.0	157.2	158.8	164.5	169.3	171.3	178.0	184.7	192.1	195.8	202.0	209.3
FINANCE, INSURANCE, AND REAL ESTATE	121.7	122.1	124.7	131.1	136.5	142.2	143.1	147.2	158.0	162.1	174.7	181.8
SERVICES	177.5	183.1	167.2	164.5	171.0	178.0	182.4	194.5	203.5	211.0	219.5	233.7
Hotels, Motels, and Lodges			186.0	161.1	188.8	200.0	203.2	204.5	199.0	205.6	220.6	222.0
Personal Services			159.1	131.5	153.5	163.4	170.5	169.7	175.8	170.9	181.7	188.5
Business Services			163.1	167.7	161.6	168.3	176.8	204.6	205.3	187.6	174.2	168.8
Medical Services			142.5	157.3	154.1	159.9	163.9	167.1	187.1	210.6	235.8	267.8
Other Services			181.9	178.6	186.3	191.6	194.6	207.0	217.8	234.3	242.8	255.8
GOVERNMENT	118.7	120.4	125.2	139.2	139.1	148.2	162.6	176.3	190.3	215.6	235.7	265.0
Federal Government	110.4	110.2	112.7	127.2	124.1	131.7	145.3	155.8	167.5	189.8	203.6	230.9
State and Local Government	178.4	187.0	198.3	209.1	215.8	227.4	240.6	261.5	275.8	303.4	332.1	349.0

TABLE 4
ALASKA GROSS PRODUCT IN CONSTANT DOLLARS BY INDUSTRY, 1961-1972
(Millions of 1958 Dollars at Average U.S. Prices)

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
ALL INDUSTRIES	683.6	704.3	725.3	780.3	832.9	900.2	1003.8	1104.5	1258.4	1290.8	1287.5	1253.0
AGRICULTURE, FORESTRY, AND FISHERIES	30.9	33.7	28.5	35.1	34.7	42.4	22.6	29.9	25.0	37.6	30.7	20.3
MINING	36.9	42.1	46.0	49.8	48.9	73.4	180.6	239.6	362.7	319.7	273.3	219.1
Metal Mining	3.5	3.6	2.8	2.0	2.6	2.4	3.5	2.3	2.5	3.7	3.8	2.5
Oil and Gas	29.3	34.4	39.2	43.6	42.0	66.7	172.9	233.3	357.8	313.6	265.2	212.3
Other Mining	4.1	4.1	4.0	4.2	4.3	4.3	4.2	4.0	2.4	2.4	4.3	4.3
CONTRACT CONSTRUCTION	33.6	32.6	34.1	45.3	52.7	47.5	48.5	48.5	53.6	54.6	58.2	61.4
MANUFACTURING	70.2	66.4	64.1	77.4	82.6	92.0	80.4	94.5	79.4	99.3	100.6	92.7
Food and Kindred Products	40.2	32.7	28.6	39.1	41.9	52.3	37.9	50.8	30.9	46.6	46.8	36.7
Lumber and Wood Products	5.4	5.6	7.0	7.5	9.0	10.7	13.8	14.1	1.3	15.7	16.4	16.7
Paper and Allied Products	17.8	21.0	21.3	22.7	23.3	20.6	19.8	19.4	21.8	24.2	23.6	24.5
Other Manufacturing	6.8	7.1	7.2	8.1	8.4	8.4	8.9	10.2	12.4	12.8	13.8	14.8
TRANSPORTATION	42.5	43.8	46.5	49.8	55.9	60.8	68.4	72.7	89.5	89.7	82.6	90.2
Trucking and Warehousing	9.0	9.6	9.9	11.2	13.8	10.6	13.7	14.3	18.8	21.7	18.9	19.8
Water Transportation	8.3	8.7	8.8	8.7	7.6	10.1	9.0	8.5	7.7	7.5	6.8	8.1
Air Transportation	22.0	22.1	25.1	27.2	31.8	36.7	41.9	46.3	58.9	56.1	52.0	57.3
Other Transportation	3.2	3.4	2.7	2.7	2.7	3.4	3.8	3.6	4.1	4.4	4.9	5.0
COMMUNICATION	60.8	57.5	56.8	54.3	57.3	61.7	58.6	61.4	61.7	64.3	89.3	94.2
PUBLIC UTILITIES	11.9	14.7	16.3	19.0	22.1	23.0	25.2	27.4	29.8	31.5	37.5	40.7
TRADE	68.0	69.4	71.4	75.1	85.2	93.9	102.9	110.9	125.2	137.3	145.7	153.1
Wholesale Trade	24.8	24.2	24.3	26.6	29.7	34.2	38.2	41.4	49.4	54.5	55.7	58.1
Retail Trade	43.2	45.2	47.1	48.5	55.5	59.7	64.7	69.5	75.8	82.8	90.0	95.0
FINANCE, INSURANCE, AND REAL ESTATE	40.2	46.5	52.0	55.8	63.5	67.5	66.2	69.1	72.0	85.3	90.1	102.4
SERVICES	32.4	34.4	37.5	42.5	45.8	47.7	52.9	56.4	62.3	68.3	72.9	80.1
Hotels, Motels, and Lodges	-	-	3.5	4.5	5.1	5.7	6.2	6.1	6.8	7.3	7.6	8.3
Personal Services			3.8	4.9	4.4	4.5	4.5	5.1	4.9	5.6	5.6	5.7
Business Services			7.7	9.2	10.7	10.6	12.2	13.8	16.0	14.8	15.6	15.1
Medical Services			8.9	9.2	9.7	10.4	11.0	11.3	12.5	13.9	15.1	17.5
Other Services			13.6	14.7	15.9	16.5	19.0	20.1	22.1	26.7	29.0	33.5
GOVERNMENT	256.2	263.2	272.1	276.2	284.2	290.3	297.5	294.1	297.2	303.2	306.6	298.8
Federal Government	225.1	228.0	232.5	235.5	238.0	240.3	243.6	237.0	234.5	234.4	229.8	212.5
State and Local Government	31.1	35.2	39.6	40.7	46.2	50.0	53.9	57.1	62.7	68.8	76.8	86.3

APPENDIX
PROCEDURES FOR ESTIMATING
GROSS STATE PRODUCT BY INDUSTRY

APPENDIX

PROCEDURES FOR ESTIMATING
GROSS PRODUCT BY INDUSTRY**Industrial Classification**

In estimating gross product, economic activity in Alaska was classified into the following eleven industrial sectors:

1. Agriculture, forestry, and fisheries
2. Mining
3. Contract construction
4. Manufacturing
5. Transportation
6. Communications
7. Public utilities
8. Trade
9. Finance, insurance, and real estate
10. Services
11. Government

Certain sectors were further broken down by splitting them into industrial components as follows:

1. Mining
 - Metal mining
 - Oil and gas
 - Other mining
2. Manufacturing
 - Food and kindred products
 - Lumber and wood products
 - Paper and allied products
 - Other manufacturing
3. Transportation
 - Trucking and warehousing
 - Water transportation
 - Air transportation
 - Other transportation
4. Trade
 - Wholesale trade
 - Retail trade
5. Services
 - Hotel, motels, and lodges
 - Personal services
 - Business services
 - Medical services
 - Other services
6. Government
 - Federal government
 - State and local government

In the six industrial sectors listed above, separate estimates were made for each of the industrial components. The results were then summed to obtain the sector totals.

Gross Product—Direct Estimates

Gross product estimates for the first four industrial sectors (agriculture, forestry, and fisheries; mining; contract construction; and manufacturing) were based on various sources of direct information concerning industrial production. In most cases, census data were also used to provide important check points for the estimates.

Agriculture, Forestry, and Fisheries

In Alaska, the forestry industry, as defined by the Bureau of the Census, generates negligible gross product. This occurs because the Census Bureau includes almost the entire forest products industry in the manufacturing sector as lumber and paper products. Gross product estimates for Alaska fisheries and agriculture were obtained using the following procedures:

Agriculture: The agriculture gross product was taken to be equal to the farm earnings reported in the personal income statistics.¹ Farm earnings include wages, salaries, and proprietors' incomes.

Fisheries: Alaska fisheries data were obtained from the 1967 census of commercial fisheries.² Alaska value added was estimated from census data on the basis of gross receipts, operating cost, and depreciation. Depreciation in the production process for Alaska was estimated using the relationship between depreciation and operating cost data for total U.S.² This was done by first figuring the ratio of depreciation to total operating costs for the U.S. This ratio was then multiplied by Alaska operating costs to obtain an estimate of Alaska depreciation and an estimate of operating costs excluding depreciation. Value added was then calculated by subtracting operating costs, excluding depreciation, from gross receipts. Alaska value added was divided by gross receipts from the Alaska census. To obtain the Alaska fisheries gross products, the resulting ratio was multiplied by the value to Alaska fishermen³ of the 1961-1972 catch. Data on value of the 1972 catch are not yet available, so a rough estimate was made based on preliminary press reports.

Because forestry production is negligible, fishing and

agriculture gross products were added to obtain the cumulative gross product for the agriculture, forestry, and fisheries category for 1961-1972. On the average, commercial fishing accounted for 97 percent of the gross product in this industrial sector.

Mining

Mining was divided into three components: metal mining, oil and gas, and other mining. Gross product estimates were calculated separately for each component; the procedure was similar for all three.

Mineral industries census data for 1963 and 1967 were obtained for the U.S.^{4,5} and Alaska.^{6,7} These data included value added and payrolls in metal mining, oil and gas, and other mining. Data were also obtained on U.S. gross product estimates for 1963 and 1967 from the gross product originating series.⁸

Value added from the gross product originating series was divided by U.S. value added in mining (from the census) for each of the three components, and the result was an adjustment factor for each component in 1963 and 1967. These adjustment factors were multiplied by value added (from the Alaska census) in mining, yielding adjusted value added for Alaska metal mining, oil and gas, and other mining. The purpose of the adjustment is to make the final estimates consistent with the concepts used by the U.S. Bureau of Economic Analysis to determine the Gross National Product.

The adjusted Alaska value-added data were divided by Alaska census payroll data for each component. These ratios were calculated for both 1963 and 1967. For metal and other mining, the 1963 and 1967 ratios were each averaged and then multiplied by 1961-1972 Alaska wages and salaries to obtain gross product estimates by year in each of the two industries. For the oil and gas industry, the 1963 ratio was multiplied by Alaska wages and salaries from 1961-1966. The 1967 ratio was multiplied by 1967-1972 Alaska oil and gas wages and salaries.⁹ The ratio was shifted to the 1967 level because of the structural change that resulted from the Cook Inlet oil fields coming into production in 1967.

Lease acquisition charges — bonuses and rentals — (for which the state received almost \$1 billion in 1969) are not treated in the accounts as income originating in current production. Instead, they are considered as capital expenditures that enter value added as capital consumption allowances (percentage depletion or cost depletion) over the productive life of the leases. The 1969 lease bonus payments, for example, will appear as part of the value of production in future years, under the heading "other factor income."

Contract Construction

For the purposes of calculation, contract construction was broken down into three small subcategories: 1) building construction—general contractors, 2) construction other than building—general contractors, and 3) construction—special trade contractors.¹⁰ Data on value added and payroll for these three were calculated from the 1967 census on the U.S.¹¹ and Alaska.¹² The gross product estimate for 1967 U.S. contract construction was obtained from the gross product originating (GPO) series.¹³ The ratio of U.S. GPO value added to U.S. census value added was calculated. This ratio was multiplied by Alaska census value added components to obtain adjusted value added estimates for Alaska. The adjusted Alaska value added estimates were divided by Alaska census payrolls, yielding a ratio for contract construction. These ratios were then multiplied by Alaska wages and salaries⁹ from the three component industries, 1961-1972, to obtain Alaska gross product estimates. The three sets of gross product estimates were summed to obtain Alaska contract construction gross product estimates for 1961-1972.

Manufacturing

Food and Kindred Products: Gross product estimates for 1963 and 1967 U.S. food and kindred products were obtained from the gross product originating (GPO) series.⁸ Estimates of value added by manufacture of food and kindred products were obtained for the U.S.^{14,15} and Alaska^{16,17} from the 1963 census and 1967 census. For 1963 and 1967, ratios were obtained of U.S. gross product estimates (from the GPO series) to value added by manufacture (from Census of Manufactures). These ratios were multiplied, respectively, by Alaska value added (from Census of Manufactures) by manufacture in 1963 and 1967. This yielded an adjusted Alaska value-added estimate for those years. Material costs were measured as wholesale value of fishery products minus value to fishermen of catch³ minus value added. Estimates of material costs were obtained from census data for 1963 and 1967. For these years, material costs were divided by wholesale value of fisheries products. The resulting two ratios were averaged. "K" was defined as the average ratio of material costs to wholesale value. Estimated Alaska gross product for food and kindred products by year was defined as (1-K) times the wholesale value of fisheries products by year minus the value to fishermen of catch. This relationship was used to calculate gross product estimates of 1961-1971 Alaska food and kindred products.

Because 1972 data were not yet available at the time of

writing, rough estimates of the value of catch were used to estimate gross product in 1972.

Lumber and Wood Products: U.S.^{14,15} and Alaska^{16,17} data were collected from the 1963 and the 1967 census on value added by manufacture of lumber and wood products. U.S. gross product estimates were also obtained from the gross product originating series.⁸ For 1963 and 1967, U.S. value added estimates from the GPO series were divided by value added estimates from the U.S. census. The resulting ratios were multiplied by 1963 and 1967 value added estimates from the Alaska census. These two estimates were divided, respectively, by wages and salaries from 1963 and 1967 Alaska lumber and wood products.⁹ To obtain gross product estimates for 1961-1972, the resulting two ratios were averaged, and the average ratio was multiplied by wages and salaries from 1961-1972 Alaska lumber and wood products wages and salaries.⁹

Paper and Allied Products: Alaska census data on paper and allied products were unavailable due to disclosure regulations. U.S. census data^{14,15,18} for 1958, 1963, and 1967 were collected on value added and payrolls. U.S. gross product estimates were also collected from the gross product originating series⁸ for those years. Value added to payroll ratios were obtained for paper and allied products. The ratios for the three years were averaged. Ratios were obtained of (GPO) value added to (census) value added in U.S. paper and allied products. These three ratios were then averaged to obtain an adjustment factor to convert census estimates to national income concepts. The two sets of averaged ratios were multiplied. The resulting ratio was multiplied by Alaska paper and allied products, wages, and salaries⁹ from 1961-1972 to obtain gross product estimates for those years.

Other Manufacturing: "other manufacturing" in Alaska consists primarily of printing and publishing; chemicals; stone, clay, and glass products; machinery; and transportation equipment. Value added by manufacture for 1963 and 1967 was obtained from U.S. census data for the above four categories. U.S. gross product estimates⁸ for the same years were obtained from the gross product originating series. Adjustment factors were computed as the ratios of value added (from GPO) to value added (from census) for the four categories for 1963 and 1967. Data from the Alaska census^{16,17} on value added by manufacture and payroll for the four categories were obtained for 1963; data on printing and publishing only were available for 1967. The adjustment factors derived from U.S. census data were multiplied by the Alaska ratios to make the Alaska value added estimates

consistent with national income concepts. Ratios of adjusted value added to payroll were calculated for the four categories. The resulting ratios were used to compute 1963 and 1967 weighted averages, using Alaska wages and salaries⁹ in the four categories as weights. The resulting two weighted averages were averaged to produce a final estimate of the ratio of value added to payroll in "other manufacturing." This ratio was multiplied by 1961-1972 Alaska "other manufacturing" wages and salaries⁹ to obtain estimates of gross product for "other manufacturing" in Alaska.

Gross Product—Estimates of Factor Payments

In those industries where there was no direct information available concerning value added, the estimates of gross product were obtained by adding factor payments. Since value added in an industry is equal to the sum of all payments made to factors of production, factor payments were divided into three categories: employee compensation, indirect business taxes, and other factor payments. The sections below describe how each of these components was estimated. Employee compensation and indirect business taxes were estimated for all industries. However, other factor payments were directly estimated only for those industrial sectors not discussed above. In the industrial sectors that had gross product estimated directly, other factor payments were treated as a residual; they were equal to gross product minus employee compensation and indirect business taxes.

Employee Compensation

Employee compensation is equal to wages and salaries plus supplements. Data on employee compensation in Alaska were lacking, but Alaska wage and salary information was available¹⁹. This is feasible since supplements have a relatively fixed relationship to wages and salaries, the ratios of U.S. employee compensation to U.S. wages and salaries²⁰ for twenty-four U.S. industries were multiplied by Alaska wages and salaries for the same twenty-four industries over the period 1961-72. The resulting data were estimates of Alaska employee compensation by industry.

Accurate wage and salary information was lacking for agriculture, forestry, and fisheries, so it was impossible to develop separate estimates of employee compensation, fisheries, so it was impossible to develop separate estimates of employee compensation, indirect business tax, and other cost data in that industry. Also, in 1961 and 1962, employee compensation, indirect business tax, and other costs were only

available for total services, but not for the components of the service sector.

Estimates of Alaska indirect business taxes for each industry, 1961-1972, were derived from U.S. and Alaska data as follows:

1. Government receipts of federal and state-local indirect business taxes were derived from tables 3.1 and 3.3 of the National Income and Product Accounts of the United States, 1961-1972.²¹ The percentages of total receipts allocated to federal and state-local government were calculated.

2. The above percentages were used to split total indirect business taxes for all industries, as shown in the gross product originating estimates (table 1.22, National Income and Product Accounts of the United States, 1961-1972²¹), into federal and state-local shares. These components were then each divided by 1961-1972 wages and salaries from all private industries²¹. The resulting Federal tax rates and state-local tax rates were added to obtain an average U.S. indirect business tax rate by year.

3. From the 1967 Census of Governments,²² indirect business taxes were calculated as total taxes minus income taxes. For the years 1962-1966, table 18 in the Census of Governments yielded U.S. and Alaska total taxes and income taxes, from which U.S. and Alaska indirect business taxes were calculated. The 1962-1966 U.S. measures of indirect business taxes were divided by wages and salaries from all private industries in those years²¹. The 1962-1966 Alaska measures of indirect business taxes were divided by total private Alaska wages and salaries⁹ (all industries less government) in those years. The Alaska results were divided by the U.S. result; this gave the Alaska indirect business tax rate relative to the U.S. indirect business tax rate.

4. For 1962-1966, the Alaska indirect business tax rates relative to the U.S. indirect business tax rates were multiplied by the state-local tax rates calculated in step (2) above. The resulting data were added to the 1962-1966 Federal tax rates from step (2); this yielded average Alaska indirect business tax rates. The 1962-1966 average Alaska indirect business tax rates were divided by the average U.S. tax rates. The results were adjustment factors for 1962-1966.

5. 1961-1972 data were collected on U.S. indirect business taxes⁸ and wages and salaries²¹ for each industry. Indirect business taxes were divided by wages and salaries to yield "industry tax rates" by year, by industry.

6. Adjustment factors were available annually for 1962-1966. For the other years, the adjustment factor was taken to be the average of the 1962-1966 adjustment factors. The appropriate adjustment factors were each multiplied by

industry tax rates by year, by industry. The results were the industry tax rates for Alaska.

7. The Alaska industry tax rates were multiplied by Alaska wages and salaries⁹ to obtain Alaska indirect business taxes by year, by industry.

Other Factor Payments

Other factor payments consist of capital consumption allowances, corporate profits, proprietors' income, net interest, and rental income of persons. Information on these items was not available for Alaska. However, U.S. data were available by industry for the relevant time period 1961-1972. Ratios of other factor payments to U.S. employee compensation⁸ were calculated for industry components in seven industrial sectors. These ratios were multiplied by Alaska employee compensation²³ by industry by year to obtain estimates of Alaska other factor payments. Gross product in each of these industry components was then calculated as the sum of employee compensation, indirect business taxes, and other factor payments. Other factor payments were treated as a residual in eight Alaska industrial components:

1. Metal mining
2. Oil and gas
3. Other mining
4. Contract construction
5. Food and kindred products
6. Lumber and wood products
7. Paper and allied products
8. Other manufacturing

Other factor payments were obtained for these industries by subtracting employee compensation and indirect business tax from gross product.

Alaska Price Deflators

Measurement of Alaska gross product in constant dollars requires use of a price deflation method. However, there are no direct Alaska price deflators available. U.S. implicit price deflators have been calculated for major industries, and these data aided in developing Alaska data.

For the years 1961-1972, implicit price deflators, employee compensation, and employment data were collected for twenty-one U.S. industries.²⁰ For each industry, total employee compensation was divided by numbers employed to

obtain average annual employee compensation. Linear regression analysis was performed on each industry over the twelve-year period, with implicit price deflators as functions of average annual employee compensation. The resulting equations are shown in the tabulation below.

Alaska employee compensation data²³ on the comparable Alaska industries were developed for the 1961-1972 period. An exception was that only employee compensation for total services was available in 1961 and 1962. For those years, the "other services" equation was used to calculate a deflator for total services. Employment data⁹ were also collected by industry, by year. Total employee compensation was divided by the numbers employed to yield average annual compensation per employee. For each industry, Alaska average annual compensation per employee by year was substituted for X in the relevant regression equation. The regression equation was then used to compute Alaska price deflators, by year, for each industry.

In four industry categories: agriculture, forestry, and fisheries; metal mining; oil and gas; and air transportation the regression analysis produced unreliable results, so different procedures were used to obtain Alaska price deflators in those industries. The metal mining, oil and gas, and air transportation industries are subject to a considerable amount of price regulation. Also, in some cases, wages and salaries are a relatively small component of total value added. For these reasons, it is not too surprising that the regression analysis indicated a very weak relationship between average employee compensation and value added price deflators. Because prices tend to be determined on national markets or by national policies, the Alaska price deflators in metal mining, oil and gas, and air transportation were assumed to be the same as the U.S. price deflators.

The price deflator for agriculture, forestry, and fisheries was computed directly from data on the prices received by fishermen. It should be recalled that in Alaska, the

INDUSTRY - U.S.	REGRESSION EQUATION	r ²
Other Mining	$Y = 38.521 + .0060X$	.653
Contract Construction	$Y = -22.381 + .0215X$	.997
Food and Kindred Products	$Y = 83.065 + .0046X$	.804
Lumber and Wood Products	$Y = 55.396 + .0099X$	.904
Paper and Allied Products	$Y = 71.489 + .0041X$	.930
Other Manufacturing	$Y = 53.301 + .0086X$	.983
Trucking and Warehouse	$Y = 61.919 + .0064X$	.949
Water Transportation	$Y = 73.962 + .0061X$	.440
Other Transportation	$Y = -69.166 + .0392X$	.960
Communications	$Y = 98.122 + .0007X$	.312
Public Utilities	$Y = 88.754 + .0017X$	.726
Wholesale Trade	$Y = 58.422 + .0063X$	.941
Retail Trade	$Y = 30.661 + .0202X$	.947
Finance, Insurance and Real Estate	$Y = 35.758 + .0125X$	.968
Hotels, Motels, and Lodges	$Y = -5.408 + .0343X$	.948
Personal Services	$Y = 29.581 + .0224X$	.996
Business Services	$Y = 31.662 + .0153X$	.972
Medical Services	$Y = 40.135 + .0221X$	.984
Other Services	$Y = 34.718 + .0232X$	.996
Federal Government	$Y = 8.121 + .0198X$	.997
State and Local Government	$Y = -9.058 + .0277X$	.998

Y = implicit price deflator

X = average annual employee compensation

r² = squared multiple correlation coefficient

"agriculture, forestry, and fisheries" industry is composed almost entirely of commercial fishing. Using 1959 as a base year, since 1958 data were unavailable (the other implicit price deflators used 1958 as a base), the price per pound of salmon, halibut, king crab, and shrimp in that year was obtained.²⁴ These prices were multiplied by volume of catch in the years 1961-1972 for the four fish species. The results were summed for each year, yielding total value of catch of all four species by year in constant prices. Total value of catch of the four species was also obtained in current prices.³ Then, for each year, the total value of catch in current dollars was divided by the total value of catch in constant dollars. The result was the Alaska agriculture, forestry, and fisheries price deflator.

Alaska Gross Product in Constant Dollars

Alaska gross product in constant dollars is computed by dividing each current dollar gross product by the corresponding price deflator. This calculation was carried out for the individual industrial components; estimates for industrial

sectors were obtained by adding the figures for the relevant components.

Since gross product in constant dollars has been adjusted for changes in prices, it provides a measure of the change in real production activity. Current dollar gross product can increase due to a rise in prices even if real production remains constant. Constant dollar gross product will increase only if there is an increase in the output of goods and services in the Alaska economy. However, the nature of the deflation procedure is such that it is difficult to give a precise interpretation to the *level* of gross product in constant dollars. The constant dollar series is most useful as a measure of the *change* in output.

It should be noted that the price deflators use 1958 as the base year, but the implicit prices used are average U.S. prices, not Alaska prices. Thus, even in the base year, the price deflators for Alaska are greater than 100 since Alaska prices are higher than U.S. prices. In crude terms then, the constant dollar gross product series measures Alaska output valued at average U.S. 1958 prices.

NOTES

1. U.S. Department of Commerce, Bureau of Economic Analysis, Special printout sheets on Alaska personal income.
2. U.S. Department of Commerce, Bureau of the Census, *1967 Census of Commercial Fisheries*.
3. Alaska Department of Economic Development, *Statistical Review 1972*.
4. U.S. Department of Commerce, Bureau of the Census, *1963 Census of Mineral Industries, Vol. I - Summary and Industry Statistics*.
5. U.S. Department of Commerce, Bureau of the Census, *1967 Census of Mineral Industries, Vol. I - Summary and Industry Statistics*.
6. U.S. Department of Commerce, Bureau of the Census, *1963 Census of Mineral Industries, Vol. II - Area Statistics*.
7. U.S. Department of Commerce, Bureau of the Census, *1967 Census of Mineral Industries Vol. II - Area Statistics*.
8. U.S. Department of Commerce, Bureau of Economic Analysis, Special printout sheets on product account data.
9. Alaska Department of Labor, *Statistical Quarterly*, various issues.
10. These breakdowns as well as the other breakdowns used in this report are in conformance with U.S. Bureau of the Budget, Department of Commerce, *Standard Classification Manual*, 1967 edition.
11. U.S. Department of Commerce, Bureau of the Census, *1967 Census of Construction Industries, Vol. I - Industry Statistics and Special Reports*.
12. U.S. Department of Commerce, Bureau of the Census, *1967 Census of Construction Industries, Vol. II - Area Statistics*.
13. U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business, July 1971*, p. 21.
14. U.S. Department of Commerce, Bureau of the Census, *1963 Census of Manufactures, Vol. I - Summary and Subject Statistics*.
15. U.S. Department of Commerce, Bureau of the Census, *1967 Census of Manufactures, Vol. I - Summary and Subject Statistics*.
16. U.S. Department of Commerce, Bureau of the Census, *1963 Census of Manufactures, Vol. II - Area Statistics*.
17. U.S. Department of Commerce, Bureau of the Census, *1967 Census of Manufactures, Vol. II - Area Statistics*.
18. U.S. Department of Commerce, Bureau of the Census, *1958 Census of Manufactures, Vol. I - Summary and Subject Statistics*.
19. Alaska, Department of Labor, *Statistical Quarterly*, various issues. *Wages and salaries for federal government - Alaska excluded military payrolls*. Personal income for federal military - Alaska, 1961-1972, was added to obtain total Alaska Federal government wages and salaries. Personal income data from U.S. Department of Commerce, *Survey of Current Business*, (various issues).

NOTES (continued)

20. U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, various issues, and special printout sheets on product account data.
21. U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, various issues.
22. U.S. Department of Commerce, Bureau of the Census *1967 Census of Governments, Vol. VI, topical studies - Number 5, Historical Statistics on Governmental Finances and Employment*.
23. The ratios of U.S. employee compensation to U.S. wages were multiplied by Alaska wages to obtain Alaska employee compensation. U.S. data were obtained from U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, various issues, and special printout sheets on product account data. Alaska data were obtained from the Alaska Department of Labor, *Statistical Quarterly*, various issues. Data on wages for federal government in Alaska excluded military payrolls. Therefore, personal income estimates for military wages in Alaska were added to obtain total Alaska Federal government wages. Personal income data came from U.S. Department of Commerce, *Survey of Current Business*, various issues.
24. Alaska Department of Fish and Game, *Alaska Catch and Production*, various issues.