BOOM OR BUST ECONOMY--PAST HISTORY FOR ALASKA?

By

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Introduction and Prospective

Alaska is unique as a part of the United States. Geographically its isolation, sub-arctic climate, large size, and regionally diverse landscape make it a region markedly different from the rest of the United States. Yet, traditional trade theory indicates that any region, regardless of location or productive characteristics, can always increase its level of welfare by producing and exporting those commodities which it can produce with the greatest relative advantage or least disadvantage and importing those commodities which can be produced with greatest relative advantage elsewhere. Self-sufficiency is not always the wisest course of action. Yet, specialization, division of productive activities, and interregional trade create a high degree of interdependence between countries and regions. And, as is evidenced by the relationship between Alaska and Washington, this interdependence can result in the major productive and service sectors of each state becoming highly dependent on the specific distribution patterns between those states. Washington has become the marketing and transportation center for Alaska while the Alaska market is of particular importance to particular trade and service sectors within the Washington economy, e.g., barge industry, port activities, etc. In particular, the transportation,

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physical distribution, and institutional aspects of this commodity and service exchange appear critical to the continued viability of the trade balance between these states.

Even as the critical importance of the physical distribution system serving Washington-Alaska trade is identified, other significant changes affecting this trade are now seemingly conventional wisdom; the Prudhoe Bay oil discovery, the Alaska pipeline, and the accompanying surge (boom, if you will) in economic activity. With the substantial resource development imminent, the corresponding increase in demand for consumer and industrial goods will burden the transportation sector between states. This emphasizes the need to obtain additional information in a systematic manner concerning transportation capacity and constraints between Alaska and other trading regions, e.g., Washington.

This need has resulted in formation of a Regional Project, NC-122, "An Economic Analysis of Present and Future Trade between Alaska and Washington." This project was initiated in the spring of 1973 between Washington State University and the University of Alaska. The project seeks to (1) identify the present trade profile between Alaska and Washington by commodity and method of movement, (2) identify characteristics of the distribution system which are and may be critical impediments to present and future trade, and (3) to develop and present technological, legislative, physical, and institutional innovations as needed to improve the performance of the physical distribution system and minimize impediments to the new level of trade between Alaska and Washington brought about by the new developments of Alaska's resources, particularly oil.

But, in order for the extent of interstate movement to be handled by the physical distribution system to be known, an accurate projection of the growth potential and composition in Alaska is necessary. Alaska's development in the

past has often been characterized as a "boom or bust economy." Is the present increase in economic activity with its accompanying demands on the trade sector also to be only short run in nature? Or, has Alaska's development in reality been one of slow and intermittent, but sustained growth? The remainder of this paper will seek to dig a little deeper into that question.

The overall objective of the paper is to examine, via historical perspective, the economy of Alaska with any "boom or bust" characteristics. Specifically, the paper examines Alaska's resource base, traces the identifiable surges in the development of Alaska, and finally, offers some research considerations in projecting the potential level of the economy and its accompanying pressure on the physical distribution and trade sectors.

Alaska's Resource Base

Although most of the "lower - 48 people" now think of oil immediately when speaking of Alaska's resources, this resource has only recently (1960) entered into the inventory of resources. Two major renewable resources, timber and fishing, have been a consistent contributor to state output. The fishing industry has long been important, with output valued from some $50 million to $150 million, wholesale value, over the last twenty years. (Table 1) Its coastal waters are the richest in the world in terms of salmon, although because of years of exploitive fishing by U.S. and foreign fleets, the annual harvest has been dropping the last few years. In fact, this year the commercial sockeye season in oncelucrative Bristol Bay has been closed.[1] In addition to salmon, Alaska is the home of the Alaskan King Crab, Pacific Northwest shrimp, and a variety of bottom fish such as flounder and halibut. These harvests have been consistent over the last twenty years. Table 1 shows a recent projection of the value of the fisheries production.

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TABLE 1

VALUE[1] OF MAJOR ALASKA NATURAL RESOURCES PRODUCTION

Calendar Year	Crude Petroleum & Natural Gas	Fisheries Products	Other Minerals	Forest Products	Furs	Commercial Agri. Products	Total Natural Resource Production
			Dollar Value[2] (Millions)				
1950	---	100.2	17.7	6.1	4.4	2.2	130.6
1955	---	69.7	23.6	29.5	4.6	3.4	130.8
1960	1.5	96.7	20.4	47.3	4.8	5.4	176.1
1961	17.8	128.7	16.9	48.0	4.2	5.5	221.1
1962	31.7	131.9	22.5	52.3	4.3	5.8	248.5
1963	33.8	109.0	34.0	54.1	4.4	5.5	240.8
1964	35.5	140.9	30.6	61.0	4.4	5.5	278.0
1965	35.6	166.6	47.6	57.5	5.8	5.2	318.3
1966	50.4	197.3	35.9	73.7	7.0	5.5	369.8
1967	95.5	126.7	39.2	81.5	5.5	5.5	353.9
1968	191.1	191.7	30.6	94.8	6.0	5.3	519.5
1969	218.7	137.7	25.9	106.0	6.0	4.5	498.8
1970	250.0	150.0	30.0	108.0	6.0	5.0	549.0
1975	900.0	200.0	50.0	150.0	6.0	7.0	1,313.0
1980	2,200.0	200.0	80.0	160.0	6.0	8.0	2,654.0

[1]Fisheries products: Wholesale market value, final stage of processing within Alaska.

Petroleum and natural gas: Crude oil and natural gas at well-heads price. Does not include estimate of value by manufacturing.

Other minerals: Average selling price of refined metals as computed by U.S. Bureau of Mines; land, gravel, stone at estimated value to construction industry.

Forest products: Value of pulp and lumber f.o.b. mill.

Furs: Raw fur value, includes U.S. shares of sales of Pribilof furs at auction.

Commercial agricultural products: Wholesale market values.

[2]All dollar values: In unadjusted current dollars. 1970-80 estimates computed at 1968 unit values.

SOURCES: U.S. Department of the Interior agencies, Alaska Department of Natural Resources, Alaska Department of Fish and Game estimates by G. W. Rogers.

A second major renewable resource is timber, which has gained in importance because of expanding Japanese demand for pulp. The value of forest products was approximately $108 million in 1970 (Table 1), and the industry does appear to have healthy prospects, particularly if environmental problems can be solved.

The fur industry, at one time Alaska's most important marketable resource, has been stable since Federal conservation policies were established in the early 1900's. The annual value of production, mainly seals from the Pribilof Islands, has remained around $4 to $5 million over the last 30 years.

Agriculture in Alaska can best be characterized as an infant industry. Although there are roughly 12 million acres of land suitable for agricultural pursuits, less than 20,000 acres are presently harvested.[2] Even with this small base, the value of production in 1970 was approximately $5 million (Table 1). Dairying is the major industry followed closely by potatoes. In addition, there are several cattle ranches on Kodiak Island, and a substantial reindeer industry carried on by the Bureau of Indian Affairs. Attaining Alaska's agricultural potential production does appear to be dependent on the productive lands being opened up by a transportation system.

Alaska's stock, or non-renewable resources, yield the majority of the state's natural resource production (Table 1). Oil was discovered at Swanson River on Cook Inlet in 1957, and by 1967 15 fields had been discovered in the area. Accompanying these fields are an ammonia plant, gas liquefaction plant, and two small refineries producing 32,500 barrels per day. It is conservatively estimated that proven reserves in the Cook Inlet Basin amount to 548.8 million barrels of oil and 6 billion MCF of natural gas.[3]

But, it is the Prudhoe discoveries that have generated renewed interest in Alaska. Since visitors to the area in the early 1900's noticed oil seepage, it has been common knowledge for some time that there was oil on Alaska's North

Slope. The state of Alaska selected Prudhoe Bay lands soon after statehood, consequently leasing these lands for $936 million in 1969. Recoverable reserves in Pet. 4 Field and the Prudhoe Bay fields are estimated at close to 18 billion barrels and 25 billion MCF of natural gas.[4] Additionally, since new technology is becoming available, and there are other offshore areas which have yet to be explored, it can be expected (with no specific level of reliability) that the present impetus of oil development could conceivably lead to discovery of new oil fields. The value of the present level of oil production was $250 million in 1970, at the prevailing prices at that time. (Table 1)

A final class of resources in Alaska are minerals such as coal, copper, tin, mercury, iron ore, and platinum; all of which (except iron ore) have experienced development at some time in the state's history. However, since much of the state has not been inventoried and costs of production are high, the extraction of these metals has been very sensitive to world demand conditions. Gold, which at one time attracted much attention to Alaska, is still not a very productive resource, even at today's high prices.

19th Century Alaska and Three Booms

An examination of any "boom or bust" phenomenon in Alaskan development must start in the late 18th century, since prior to this time the only economic activity was the fur harvest of the sea otter and fur seal. Very little changed in Alaska for 20 years following its purchase from Russia in 1867.

The reasons for this lack of development do seem identifiable. First, although the Federal government expressed no interest in developing the area, most of the land was public land. A number of small fishing communities had developed along the coast, but their development was stymied by the lack of land laws to permit the cutting of timber on public land. As a result, all construction materials had to be imported. Additionally, these communities had

no taxing powers so education and public services were left to the missionaries. Secondly, those canneries that developed on the coast were not subject to taxation, and since they operated only a few weeks of the year using imported labor, they did not create finances for development of local communities. The first census conducted in Alaska in 1870 estimated a population of 33,426.[5]

Gold Boom

Minor gold strikes in Southeast Alaska stimulated an influx of people so that by 1888 the population had reached 49,850. But, the Gold Rush to the Klondike and then to Fairbanks and Nome would lead to a peak of 64,356 in 1910.[6] Prior to the Gold Rush in 1889, Alaskan internal development was very slow. The Federal government, being the sole owner of all land, would lease it for trade and manufacture only. Hence, no banks, insurance companies, real estate development, or transporation improvements were undertaken.

But Alaska soon became a politically interesting subject as plans for building railroads and roads into the gold fields of the interior attracted the attention of the legislature. The White Pass and Yukon Railway was built in 1890. J. P. Morgan and Associates leased valuable copper lands in the Copper River Basin and constructed a 200 mile railroad in 1906.

By 1906 Alaska's gold production ranked it second in the world, but by 1910 the boom was virtually over.[7] The "bust" economy was as pronounced as had been the boom before. And the Federal government's policies did seem to contribute to the decline. First, the railroad needed coal, but the Federal government didn't allow development of coal mines. Also, all the timber was still in reserves with no permission to harvest. Additionally, construction of the Alaska Railroad, begun in 1905, was not finished until 1925 because the initial appropriation of $2,500,000 was not enough to complete the 463 mile route. And,

as the glamour of the Klondike faded, so did Congressional interest in aiding Alaskan development. Finally, a monopoly had been granted to the Alaska Steamship Company, the only transportation method available.

The following years were characterized by decreasing population but an increasing value of resource extraction. Copper, stimulated by high market prices, peaked at $49 million in 1916, employing 9,000 people.[8] Salmon fishing yielded $51 million in 1918, while a total of 31,213 people were employed in that industry. However, only one sixth of these were permanent Alaskan residents. By 1917 Alaska commerce passed $100 million, but tax collection problems from fishing and mining and lack of protection of fishing grounds prevented much of this value from entering the local economy. Homesteading had been extended to Alaska but only for 80 acres. Population had decreased 14.7 percent from 64,356 in 1910 to 55,036 in 1920.[9]

Military Boom

By 1930 the population in Alaska had recovered to 59,000, still less than its peak of about 64,000 in 1910.[10] The War brought a new boom to Alaska in the late 1930's and early 1940's. When the Japanese landed on Attu Island in the Aleutian Islands, the Federal government realized the strategic importance of Alaska. The Alcan Highway, airfields, and radio range stations were built. Geological mapping and other inventory mapping were undertaken. These brought over 300,000 men into Alaska.[11] Following the war the Distant Early Warning System (DEW line) was built, and in general, the 1950's became the decade of the military with an accompanying increase in population of 76 percent from 1950 to 1960. During this time one fourth of the state's population was military and at least one fifth of the civilians worked for the military.[12]

However, following the initial large expenditures of $24 million in 1950 and $30 million in 1951, expenditures declined to $10 million in 1955.[13]

Defense spending and Federal spending in general had become the mainstay of the economy, hence making the local people highly dependent on the whims of Federal funding. The land problems remained virtually the same with lack of monies being generated for the local economies, some prohibitions, and fisheries' problems. The Alaska Steamship still had its control on the transportation system, charging three times a high a rate for salmon going south than trade goods going north.

Oil Boom

Alaska became a state in 1957, and most Alaskans felt this would be the beginning of a new era of self determination, increased federal aid, and the attainment of a steady and rapid growth. Not until the "oil boom" were these goals to become obtainable. Oil was discovered in Cook Inlet in 1957, and in the North Slope in 1969.

What followed was a frantic rush to explore the North Slope. A boom psychology, reminiscent of the Gold and Military Booms, quickly developed in anticipation of the construction of the Trans-Alaska pipeline. Real estate prices began increasing as the available private land was increasing in value due to speculation. In order to facilitate the erection of the pipeline, the Native Land Claims Act was passed returning title to the native Alaskans of 40 million acres as well as giving $1 billion, plus royalty on mineral production.[14] Air traffic to Alaska's interior has risen considerably, and additional barges and ships have been added by all carriers serving the region.[15] Hence, a new boom is on in Alaska, a not too surprising conclusion. Tables 2 and 3 indicate both the steady growth of Alaska's population and personal income over the last 13 years. Additionally, comparison of pre-1969 annual growth in personal income of 4.4% with the post-1969 period's growth of 8% does reflect the recent surge in economic activity in Alaska.

Bust - The Next Step?

As in any boom situation, a large number of resources, both human and

ALASKA
CURRENT POPULATION ESTIMATES

TABLE 2

	Total Resident	Total Civilian
April 1, 1960	226,167	193,678
July 1, 1961	236,669	204,180
1962	242,817	209,817
1963	249,904	216,904
1964	253,204	220,800
1965	265,192	232,175
1966	271,505	238,305
1967	277,906	244,227
1968	284,880	252,260
1969	294,560	262,210
April 1, 1970	302,361	270,936
July 1, 1971	312,930	282,856
1972	324,281	297,831
1973	330,365	302,912

(Available by election districts until 1970, then by census districts)

Source: Alaska Department of Labor

PERSONAL INCOME - ALASKA

TABLE 3

	Total (Millions $)	Per Capita ($)
1960	659	2876
1961	641	2694
1962	672	2733
1963	711	2778
1964	801	3046
1965	869	3205
1966	916	3378
1967	1022	3676
1968	1111	3898
1969	1249	4219
1970	1404	4603
1971	1536	4907
1972	1671	5141

Source: Survey of Current Business, September 1973

physical, will be attracted to the state. The possibility of over investment, as typified by the long deserted ghost towns of past Alaskan booms, is large. It is generally accepted that the development of the North Slope fields will probably not have much effect on secondary and tertiary industry since the multiplier effect and backward linkages of oil industries are fairly small as the returns are mostly to capital rather than labor. So the greatest sustained impact will be in the form of royalties on an annual basis. These monies will be available on a consistent level for, by some projections, the next 30 to 40 years.[16] The decision as to what and how these finances will be spent may be the critical variable to short-circuiting the normal bust. A choice by the state as to use of the mineral revenues for public services, low level of taxes, and even a social dividend versus an overt attempt to ameliorate some of the contributory causes to previous "bust" experiences does appear to be the coming choice. The past problems do appear to be occasioned by lack of transportation alternatives (both internal and external), seasonal resource exploitation, migratory population, and unplanned land utilization. It would appear that solving these problems would involve investment programs in transportation facilities, human resources through education and technical training, physical capital such as industrial facilities, and a comprehensive inventory of natural resources.

A carefully planned transportation network throughout the state would make inaccessible resource and agricultural areas available while allowing for a more orderly and conservation constrained extraction of the state's potential. Examination of previous booms suggests that Alaska has been considered a resource bank to be tapped only when national interest has deemed it interesting to do so, with little provision for generating an ongoing state economy. Human capital investment is important because of the state's unemployment problem (14 percent before the influx of people seeking oil jobs) as well as the migration of the young out of the state for education purposes. If a sizeable trained labor

force can be induced to remain in Alaska, via state subsidized industries if necessary, a potential for some industrial expansion does exist. The new market in Japan and other nations in the Pacific Rim Basin may offer competitive outlets for this productive capacity.

Summary and Research Implications

This paper has, with no pretext of quantitative rigor, sought to examine the "boom or bust" history of Alaska relative to projecting the future growth pattern of the state. Such a projection would be useful so as to quantify the pressures and strains which will be placed on the physical distribution system serving the trade sector of the state, particularly with Washington which handles about 90 percent of all Alaskan trade.

A brief review of the resource base of Alaska indicated a potential for a growing resource-extractive based economy for the relevant future. The productive capacities of the newer agricultural, mineral, and oil resources suggested a broader based economic activity would be characteristic of the state.

A brief, even cursory review of the three boom periods in Alaska history revealed specific problems that caused the "bust" component to quickly follow the boom. Inadequacies in government policies, transportation facilities, and human and physical capital investments were all contributing factors to the previous "busts" of the Gold and Military era. Although this paper did not argue that the Alaskan economy was one of total cyclical instability, the authors did find identifiable patterns of the "boom or bust" phenomenon.

The implications for research is as clear as the rigor of the above review was not. To wit, economic data, especially prior to 1950, simply do not allow a comprehensive charting of the state's economic progress. Thus, research on the existing boom, or increase in economic activity if you will, must seek to specify potential areas of a "bust retardant," e.g., some of the previous

assertions as to capital improvements were too unquantified and general. The specific impacts as a "bust retardant" of various governmental policies should be the focal point of research studies. Particularly, information on the specific multipliers and industrial linkage coefficients for the economy of Alaska is the forerunner to useful policy and developmental studies. In fact, competent projections as to levels and tenure of resource royalties precede even these studies.

Finally, since increased economic activity and growth in Alaska will be accompanied by new demands on the trade sector of Washington, an accurate projection of the level of increased demand is essential. The studies on the internal structure of Alaska and the impacts of various governmental policies on Alaska, do appear to be the logical first step to quantifying the needed changes in the physical distribution system serving Alaska trade.

Footnotes

[1] Alaska Magazine, June 1974, p. 31

[2] Alaska's Agricultural Potential, Cooperative Extension Service, University of Alaska, Fairbanks, 1974.

[3] Tussing, Arlon; Rogers, G. W.; and Fisher, Victor, Alaska Pipeline Report, Institute of Social, Economic and Government Research, University of Alaska, Fairbanks, 1971.

[4] Ibid.

[5] Ninth Census of Population, U. S. Department of Commerce, Bureau of Census, U. S. Government Printing Office, 1870.

[6] Ibid.

[7] Gruening, Ernest, An Alaska Reader (1867-1967), Meredith Press, New York, 1968.

[8] Ibid.

[9] Op. cit. Fourteenth Census of Population.

[10] Ibid.

[11] Op. cit. Gruening.

[12] "Alaskan Economy in the 60's," Alaska Review of Business and Economic Conditions, Vol. VII, 1970.

[13] Op. cit. Gruening.

[14] "Alaska Native Land Claims Act," December 18, 1971.

[15] "North Slope Need Could Cause Shipping Crisis," Anchorage Daily Times, April 19, 1974.

[16] Op. cit. Tussing et. al.