

Sales Tax

Revenue Potential
of a
General Sales Tax
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INTRODUCTION AND PURPOSE OF STUDY

Current revenue projections for fiscal years 1988 through 1992 indicate that revenues generated by petroleum related activities (Oil and Gas Corporate Net Income Tax, Oil and Gas Property Tax, Oil and Gas Severance Tax and Oil and Gas Royalties) will comprise over 81.5 percent of total unrestricted General Fund Revenues for the period. Therefore, state government is presently very dependent on these sources of revenue. Finding sources of additional revenue is becoming increasingly important.

Prudhoe Bay oil production has already peaked. Total Alaskan production is currently projected to decline from over 1.848 million b/d in fiscal year 1986 to under 400,000 b/d by fiscal year 2005. This represents a compound annual average rate of decline of 7.9 percent.⁽¹⁾ Other North Slope fields which are currently projected to begin producing will only partially offset this decline. These projections are based only on the development of presently known and economically developable reserves. Additional discoveries may be made in the future, but their development as well as the development of some currently known but high cost reserves is highly dependent on the future growth of real oil prices. In addition, these future discoveries may be made on federal OCS lands from which the state would receive little or no revenues. Future petroleum revenues are therefore both exhaustible and highly uncertain.

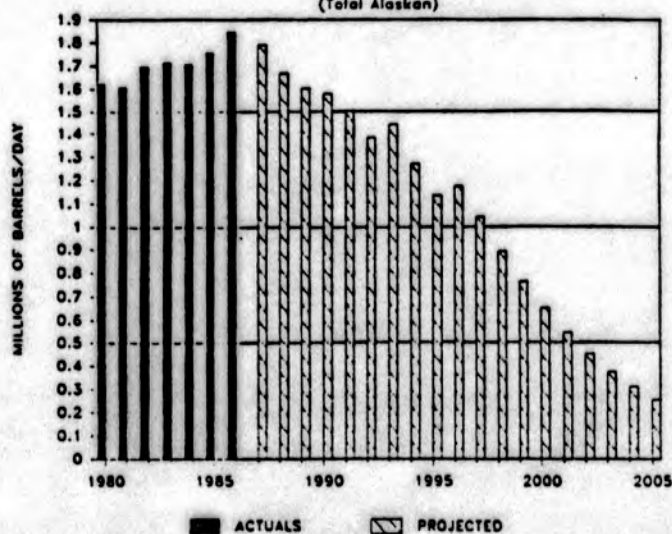
TABLE 1

PETROLEUM PRODUCTIONS PROJECTIONS
(Millions of Barrels/Day)

FISCAL YEAR	TOTAL ALASKAN
1980	1.621
1981	1.609
1982	1.696
1983	1.714
1984	1.704
1985	1.714
1986	1.848
1987	1.842
1988	1.755
1989	1.687
1990	1.550
1991	1.499
1992	1.384
1993	1.287
1994	1.257
1995	1.237
1996	1.095
1997	1.182
1998	1.020
1999	0.895
2000	0.775
2001	0.674
2002	0.593
2003	0.513
2004	0.450
2005	0.384

FIGURE 1

PETROLEUM PRODUCTION PROJECTIONS
(Total Alaskan)



Alaska North Slope oil prices, meanwhile, have dropped from a high in 1981 of \$33.67 per barrel to a 1987 low of \$8.50 (the average is projected to be \$12.59 for the year). These prices have become extremely volatile and difficult to predict. Even if production wasn't declining, this volatility in oil prices and riskiness of oil related revenues could undermine the major source of revenue for this state. To a large extent, this has already happened.

TABLE 2

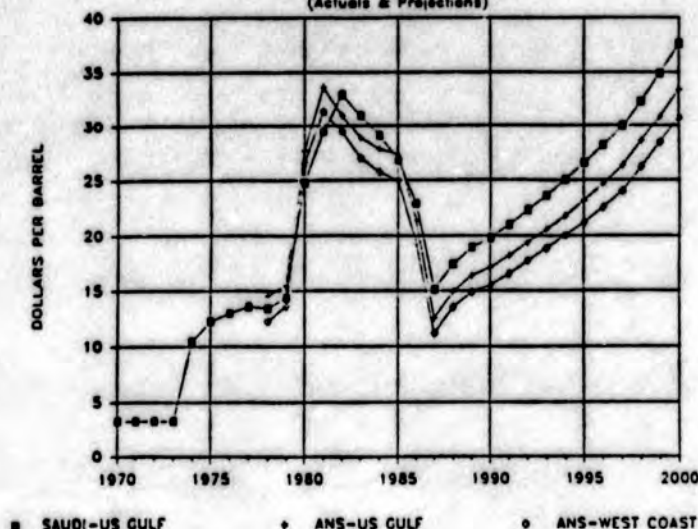
ACTUAL & PROJECTED CRUDE OIL PRICES
(Dollars per Barrel)

FISCAL YEAR	SAUDI US GULF	ANS US GULF	ANS WEST COAST
1970	3.25		
1971	3.25		
1972	3.25		
1973	3.25		
1974	10.45		
1975	12.20		
1976	13.04		
1977	13.61		
1978	13.46	14.60	12.30
1979	14.41	15.50	13.70
1980	24.75	27.60	26.50
1981	29.45	33.67	31.43
1982	22.99	21.07	29.50
1983	21.05	20.87	27.00
1984	29.10	27.83	25.68
1985	26.80	27.25	24.92
1986	22.90	21.20	19.76
1987	15.15	12.59	11.19
1988	17.29	14.97	12.57
1989	18.93	16.29	14.90
1990	19.77	17.10	15.52
1991	20.96	18.16	16.52
1992	22.21	19.27	17.70
1993	23.62	20.53	18.82
1994	25.03	21.00	20.02
1995	26.55	22.18	21.20
1996	28.10	24.67	22.57
1997	29.93	26.20	24.01
1998	32.26	28.60	26.18
1999	34.91	30.95	28.46
2000	37.62	33.45	30.07

FIGURE 2

CRUDE OIL PRICES

(Actuals & Projections)



The purpose of this study is to develop a model that will allow us to evaluate the revenue potential and burden of general sales tax proposals presented by Legislative and Executive policy makers. We have presented alternative structures here primarily for illustrative purposes, and in no way wish to suggest these are proposals of this Department or section. The value of these alternatives is comparative, illustrating the way different structural elements in a tax can be altered to obtain various results, and to show what scope of information it is possible to generate in response to a proposal. We have evaluated the advantages and disadvantages, as well as preliminary estimates of fiscal impact, for each of our illustrative general sales tax alternatives in order to suggest what kinds of questions could be asked about various proposals.

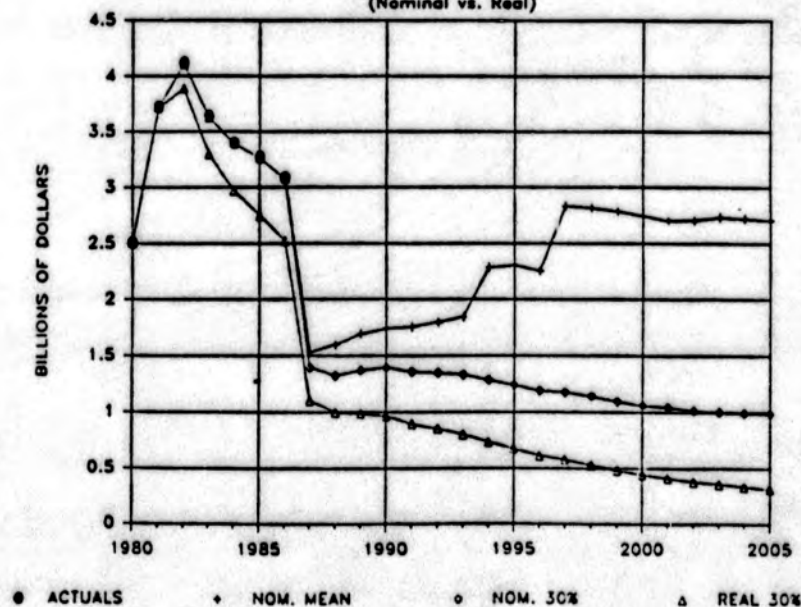
It should be noted at the outset, that it will be practically impossible to replace petroleum revenues with taxes on individuals or other industrial sectors given the present structure of the Alaskan economy. In fiscal year 1984 the gross wellhead value of North Slope oil production was approximately \$10.6 billion⁽²⁾ while the estimated gross production of all other nongovernmental industrial sectors was only \$8.7 billion and total disposable personal income was \$6.8 billion. In addition, oil production has been high profit sector and thus supported much higher levels of taxation than other more marginal industrial sectors. Also, many other industries are currently supported, directly and indirectly through state government spending of oil revenues.

TABLE 3
GENERAL FUND UNRESTRICTED REVENUE PROJECTIONS
(Nominal vs. Real)

FISCAL YEAR	ACTUALS	ESTIMATES MEAN CASE (NOMINAL \$)	ESTIMATES 30 % CASE (NOMINAL \$)	ESTIMATES 30 % CASE (REAL \$/1981)
1980	2.501			
1981	3.710			3.710
1982	4.108			3.691
1983	3.631			3.270
1984	3.390			2.968
1985	3.260			2.746
1986	3.076			2.523
1987		1.535	1.399	1.105
1988		1.601	1.325	1.000
1989		1.697	1.374	0.992
1990		1.748	1.398	0.985
1991		1.763	1.359	0.897
1992		1.802	1.349	0.851
1993		1.851	1.324	0.800
1994		2.290	1.287	0.733
1995		2.307	1.241	0.672
1996		2.254	1.191	0.613
1997		2.830	1.178	0.576
1998		2.810	1.143	0.520
1999		2.779	1.098	0.483
2000		2.738	1.063	0.444
2001		2.698	1.045	0.414
2002		2.699	1.020	0.383
2003		2.730	1.004	0.358
2004		2.718	0.997	0.327
2005		2.699	0.989	0.317

FIGURE 3

GENERAL FUND UNRESTRICTED REVENUES
(Nominal vs. Real)



TAX CAPACITY AND TAX BURDEN ON ALASKANS

The assessment of the burden of taxation is a complicated problem. Statutes determine who is legally responsible for a tax. In contrast the economic incidence of a tax is the change in the distribution of private real income brought about by a tax. Different taxes can be shifted to differing extents from the person or business legally responsible to other individuals or businesses.

In less rigorous terms, concepts such as burden are examined by resorting to state-by-state comparisons of taxes paid usually on a per capita basis or in relation to some measure of revenue capacity. Because measures such as per capita income are poor measures of revenue capacity alternative concepts have been developed. One such measure involves the concept of a representative tax system (RTS).(3)

"The RTS is designed to answer this question: what would be the total revenue of each of the 50 states if every state applied identical tax rates - national averages - to each of 26 commonly used tax bases?"

Tax effort is a companion concept that indicates the overall tax burden placed on the base as defined by the tax capacity concept. A tax effort index is created by dividing the state's actual tax collections by its estimated tax capacity and multiplying by 100.

"The result may be interpreted as a measure of how much a state chooses to exploit all its potential tax bases relative to other states. If a state has a tax effort beneath the national norm, it will have an effort index under 100. Conversely, if a state has a tax effort in excess of the national average, it will have an effort index over 100."

The most current estimates of these ratios is in an Advisory Commission on Intergovernmental Relations publication Tax Capacity of the 50 States. Dated May 1985, the book is based on tax data for 1982. While aged, the numbers are indicative of Alaska's state and local tax burden relative to other states.(4)

Indexes of this sort can often hide subtleties in the underlying relationships. For instance the effort variables are developed using per capita measures which hide the fact that a substantial portion of the tax may be paid by out-of-state visitors or seasonal workers. Alaska, for instance, shows a high effort for hunting and fishing licenses. Although care has to be exercised in their interpretation, the figures indicate that Alaska residents are taxed at relatively low levels on income and sales when compared to residents of other states.

Overall Alaska shows a high tax effort because of our resource based taxes. However, effort measures are considerably below national norms for several major taxes commonly found in other states. Column two below shows the relative importance of major taxes and column three shows Alaska's effort index for these taxes.

<u>Tax</u>	<u>State-Local Tax Collections as % of U.S. Total</u>	<u>Alaska Effort Index 1982</u>
General Sales	23.5%	29.1
Selected Sales	11.7%	102.0
License Taxes	3.5%	118.0
Individual Income	19.7%	.7
Corporate Income	5.6%	95.0
Property	31.8%	105.0
Estate and Gift	.9%	22.9
Severance	3.4%	278.8

GENERAL DESCRIPTION AND STRUCTURE OF RETAIL SALES TAXES

General Sales Tax

A general sales tax could be enacted at the State level. Alaska currently has no sales tax at the State level, however seven boroughs and at least fifty-two smaller municipalities do levy some form of sales tax. The rates levied range from one percent to five percent. The base upon which these rates are levied also varies with different exemptions being allowed in various communities. If a sales tax were enacted at the State level it would be in addition to the tax at the local level, however, it should be noted that Anchorage and Fairbanks, the two most populous municipalities in the State currently have no sales tax.

Currently forty-five of the fifty states levy some form of sales tax at the state level. Sales taxes are a significant source of state government revenues in most of the states which levy them. Sales taxes account for 48.8 percent of all State tax collections. The sales tax base varies considerably as to exemptions allowed and the degree to which services are taxed from one state to another. Food purchases, except restaurant meals and alcohol, are exempt in twenty-eight of the forty-five states. Prescription drug purchases are exempt in forty-three states. Gas and electric utility bills are exempt to some degree in thirty-two states. Five states exempt clothing purchases to some degree. Also, four states allow some credit for sales taxes paid against state income tax liability. These various exemptions and credits are meant to ameliorate the regressive incidence of the sales tax.

Services are taxed very comprehensively including all personal and professional services in only three states. Twenty-five states either tax no services or tax services very narrowly and selectively such as laundry and cleaning or advertising and selected business services. The remaining seventeen states tax services to a considerable degree although not comprehensively with most exempting professional services.

The rates levied on taxable purchases of goods and services also varies considerably from state to state with a low of three percent to a high of seven and one half percent. The median rate levied by states which exempt food is five percent and by those which do not exempt food is four percent.

Retail sales taxes tax consumer expenditure, thereby taxing income at its use, in contrast to income taxes, which taxes income at its source. The basic elements of any tax structure apply to the retail sales tax. These are tax base, rate(s) and credits against tax owed.

Tax Base

Tax base is characterized by what is included, excluded, and deductible from the base. It is also affected by the presence of exemptions from the tax.

Retail sales are the primary base of state and local sales taxes. Sales for resale generally are excluded to avoid problems of multiple taxation. While a general retail sales tax can logically cover services, in most cases services are excluded. Thus, a substantial portion of consumer expenditure is not taxed. A few services are, however, included in the tax bases of some states. These include admissions, lodging and public utility services.

Equity considerations lead some state to exclude particular retail sales from the tax base. The most common exclusions are prescription drugs and food for consumption at home. Some taxing states allow non resident visitors to obtain exemption certificates for sales tax. All sales tax states have use taxes as part of their sales tax structure. These use provisions apply to goods bought outside the state and brought into the state for consumption.

Tax Rates

Tax rates are applied to the tax base. They can be separated into rate groups for various consumer goods. This can be done to help make the tax more equitable, (i. e. taxing goods more highly that are consumed by higher income taxpayers (luxuries and non health services) or taxing subsistence items (basic food purchases, children's clothing or utilities) at low rates or not at all . The tax rate can also be applied differentially for other social policy goals, i. e. to tax goods with high social cost associated with them, such as alcohol, at higher rates, or to tax goods associated with low tax capacity at low rates or not at all, eg. medications and health services.

Tax Credits

Tax credits against tax owed are deducted after the rate is applied to the tax base. Tax credits are available for special expenditures and can be effective in avoiding penalties for or encouraging those qualifying expenditures. Credits can also be used to offset amounts paid to other government; thereby preventing double taxation of the same transactions.

EVALUATION OF ALTERNATIVES

The tables presented in this report summarize only the projected quantitative impacts of two sales tax proposals. Other issues do arise, however. Each of the elements of the tax structure can be tailored to affect different taxpayers differently (or to try and affect them identically). The alternative tax structures we present will each be analyzed briefly on a number of issues including how they affect taxpayer groups, how easily administered they are and how politically palatable they might be.

In general, the issues which should be considered with respect to measures to increase revenues are as follows.

Economic Efficiency: What effect does the proposed tax have on incentives and economic decision making? How does the tax alter consumption, production or resource allocation decisions?

Equity: Who bears the burden of the tax and how does that burden compare with ability to pay or benefits received? Is the tax progressive or regressive with respect to income and/or wealth?

Elasticity: What is the sensitivity of the tax revenue yield to changes in economic or demographic conditions? As income or population increase or decrease, does tax revenue increase or decrease in greater, lesser or equal proportion?

Administrative Efficiency: How costly is the tax to administer in terms of resources devoted to administration and compliance relative to the revenue yield of the tax? Who bears the burden of administrative cost, the taxpayer, the State or the tax collector (if different from the State)?

Political Feasibility: How acceptable is the proposed tax to the legislature and/or the electorate given existing social, political, and economic conditions? Who benefits, who loses, and who has the most political power?

Additionally, we are concerned with three other issues.

Interstate Capture: How much of the tax owed by nonresident taxpayers who work or travel in Alaska is it possible to capture?

Intergovernmental Effects: Does the tax erode the tax base of higher level (federal) or lower level (local) governments? If such erosion should be mitigated, how can it be done? Do higher level or lower level government taxes erode the State tax base? If such erosion should be mitigated, how can it be done?

Inflation Effects: What is the effect of inflation on the elements of the tax structure and the burden on the taxpayer? If this should be mitigated, how can it be done?

Efficiency

As is the case with many other taxes it is difficult to make definitive statements on how different types of sales taxes influence consumer welfare. The public finance literature suggests that it is unlikely that efficiency will require a general sales tax with the same tax rate for each commodity but recognizes the problems involved in differentiating rates among different commodities.

Elasticity

It is difficult to determine precisely how the sales tax will vary over time as income and disposable income changes. An increase in income will have different implications for revenues depending on the distribution of that increase. An increase which goes primarily to high income households may have a significantly different impact than a similar increase distributed mostly to low income groups. The reason is that high income households may at the margin spend only a small fraction of their income on taxable commodities.

With this caveat in mind it can be stated that a broad based retail sales tax is generally a fairly stable source of revenue. Consumption expenditures do not fluctuate as widely as personal income as individuals may alter savings while maintaining consumption over the short term. The yield from the tax should move roughly in proportion to movements in income, population and prices and will likely be less elastic than an individual income tax.

Equity

The conventional view of the distributional effects of a general sales tax is that it is regressive. As annual income rises, the proportion of household income devoted to consumption falls. Hence the amount of tax paid is a higher proportion for low income households.

Two arguments are commonly invoked against this conventional reasoning. First, some argue that the proportion of lifetime (as opposed to annual) income that is devoted to consumption is roughly the same at all income levels. Second, the regressivity argument implicitly assumes that the taxes on a good are borne entirely by the consumers of the good while in reality some shifting does occur.

In an attempt to deal with the regressivity concern some sales tax systems tax certain items consumed intensively by the poor at low rates or exempt these items completely. This is not without problems. For instance, while food expenditures are a large item in the budget of poor people they can also comprise a high proportion of income at higher levels. In addition such selective treatment causes administrative problems such as whether certain items (e.g. soft drinks) are in the favored category (e.g. food). Some states with both income and sales taxes utilize a sales tax credit against income tax liability as a device for dealing with equity concerns.

Administrative Compliance

The main attraction of sales taxes is probably its ease of administration. It is collected from sellers at the retail level which means fewer individuals to deal with than is the case with income taxes.

The main administrative complexities arise when it is unclear if some type of transaction creates a tax liability. Arbitrary distinctions are often made such as taxing food consumed at a restaurant but exempting the same meal if taken home for consumption. Also, tax evasion remains a problem.

In many states which have both state and local general sales taxes some efficiencies are achieved by piggybacking the local tax onto the state system. Compliance costs fall mostly on retailers with some states compensating stores for costs by allowing them to keep some percentage of their tax obligation.

Nonresident Taxpayers

Sales taxes will be paid by nonresident workers and tourists to the extent that they consume goods in the state. Some states such as Washington reduce this payment through issuance of tax exempt cards which apply to purchases which are ultimately consumed out-of-state.

Intergovernmental Effects

Under the new federal tax law state and local sales taxes are no longer deductible. This weakens the sales tax as an alternative to a state income tax as the latter retains its deductible status.

Some concern needs to be given to the effect of a state sales tax on those municipalities which have sales taxes or might adopt such taxes in the future. For instance, the imposition of a four percent state tax on top of a four percent local tax adds substantially to the cost of in-state purchases. Such rates would create incentives for consumers to avoid Alaska taxes by catalogue ordering or combining shopping with vacation or business trips.

Political Acceptability

In terms of political acceptability, sales taxes have been traditionally supported by higher income groups fearing increased property or income taxation. They have been opposed by labor organizations primarily on equity grounds and retailers who feared loss of business and compliance costs. Sales taxes are not as visible as income taxes in that the tax is levied in small bits each time a purchase is made rather than in larger amounts through payroll withholding or payments at year end. Since Alaska has never had a state sales tax, it is questionable whether the legislature would enact such a major new tax on individuals until oil revenues decline significantly.

Discussion of Estimates

The data presented in the table provides an approximation of the revenues which might be realized by a sales tax on differently configured tax bases. Examination of 1985 provides a good bench mark as the next several years will likely show lower levels of receipts and sales because of the economic slow down caused by lower oil revenues.

A one percent tax on retail sales in 1985 would have raised about \$40 million. If all services were taxed, the same one percent rate would generate an additional \$14 million. Finally, a one percent tax on electric utility sales for both residential and commercial customers would realize in the neighborhood of \$3 million. In total then a very broad based sales tax in a good year would have raised about \$57 million. This figure would not include revenues from a use tax and is most certainly an upper bound in the sense that virtually all retail and service transactions are covered. Exclusions of various items would correspondingly lower revenues. For instance, if all sales of food stores were excluded nearly \$9 million less in revenue would be realized. Note that some sales of food stores would likely remain taxable. However, we do not have the data to separate food and non-food sales for such establishments.

Higher tax rates would of course increase revenues. It is probably not valid to assert that a four percent rate would raise four times as much revenue because individuals will make some adaptations to the additional cost of purchased goods and services. Bartering, catalogue purchases and substitution of second hand purchases for new cars or appliances would likely occur.

The second table projects sales tax revenues for a tax based on retail sales. The analysis assumes that retail sales are a constant percentage of personal income for the years covered in the table.

ESTIMATED YIELD OF 1 % SALES TAX
VARIOUS TAX BASES 1985

SIC CODE FOR INDUSTRY	INDUSTRY	ESTIMATED RECEIPTS OR SALES \$	YIELD FROM 1 % TAX \$

RETAIL TRADE:			
52	BUILDING MATERIALS	\$387,270,000	\$3,872,700
53	GENERAL MERCHANDISE	\$462,926,000	\$4,629,260
54	FOOD STORES	\$890,572,000	\$8,905,720
55	AUTO DEALERS (EXCL 554)	\$600,134,000	\$6,001,340
554	GASOLINE SERVICE STATIONS	\$215,048,000	\$2,150,480
56	APPAREL & ACCESSORIES	\$137,886,000	\$1,378,860
57	FURNITURE	\$172,315,000	\$1,723,150
58	EATING & DRINKING	\$547,137,000	\$5,471,370
59	MISC RETAIL (EXCL 591)	\$439,277,000	\$4,392,770
591	DRUG & PROPRIETARY STORES	\$157,031,000	\$1,570,310
	TOTAL RETAIL TRADE	\$4,009,596,000	\$40,095,960
SERVICES:			
70	HOTELS AND LODGING	\$184,503,000	\$1,845,030
72	PERSONAL SERVICES	\$64,985,000	\$649,850
73	BUSINESS SERVICES	\$270,034,000	\$2,700,340
75	AUTO REPAIR GARAGES	\$105,228,000	\$1,052,280
76	MISC REPAIR SERVICES	\$61,727,000	\$617,270
78	MOTION PICTURES	\$12,871,000	\$128,710
79	AMUSEMENT & RECREATION	\$28,092,000	\$280,920
80	HEALTH SVCS EXCEPT HOSPITALS	\$232,111,000	\$2,321,110
81	LEGAL SERVICES	\$136,933,000	\$1,369,330
82	EDUCATIONAL SERVICES	\$8,786,000	\$87,860
83	SOCIAL SERVICES	\$13,089,000	\$130,890
891	ENGR ARCHIT SURVEY	\$247,033,000	\$2,470,330
892	ACCTG AUDIT BOOKKEEPING	\$56,979,000	\$569,790
	TOTAL SERVICES	\$1,422,371,000	\$14,223,710
ELECTRIC UTILITIES			
	RESIDENTIAL	\$150,605,000	\$1,506,050
	COMMERCIAL	\$147,987,000	\$1,479,870

PROJECTED SALES TAX REVENUES
WITH AND WITHOUT SALES OF FOOD STORES
APPROXIMATE YIELD FOR EACH 1 % OF TAX

YEAR	ESTIMATED SALES OF ALL RETAIL ESTABLISHMENTS	YIELD OF 1 % TAX	ESTIMATED SALES IF FOOD STORES EXEMPTED	YIELD OF 1 % TAX
1985	\$4,009,600,000	\$40,096,000	\$3,119,000,000	\$31,190,000
1986	\$3,945,500,000	\$39,455,000	\$3,066,700,000	\$30,667,000
1987	\$3,762,000,000	\$37,620,000	\$2,924,100,000	\$29,241,000
1988	\$3,835,500,000	\$38,355,000	\$2,981,200,000	\$29,812,000
1989	\$3,929,600,000	\$39,296,000	\$3,054,400,000	\$30,544,000
1990	\$4,072,600,000	\$40,726,000	\$3,165,600,000	\$31,656,000
1991	\$4,174,300,000	\$41,743,000	\$3,244,600,000	\$32,446,000
1992	\$4,325,600,000	\$43,256,000	\$3,362,200,000	\$33,622,000

DATA DESCRIPTION, LIMITATIONS AND USE

CENSUS OF RETAIL TRADE

Description of data used in estimates

Each five years the U.S. Department of Commerce undertakes a series of economic censuses. The last census available is that done for 1982. The next census will occur in 1988 for the year 1987. The censuses for Retail Trade and Service Industries for 1982 provided the data for this analysis. While these publications are dated they provide the best available information on level of receipts and sales by industry groupings. The industry groupings are important as they provide a framework for projecting sales and receipts to current levels and also for approximating the impact of excluding particular sales (e.g. food, drugs) from the tax base.

Data for these reports is compiled from administrative records of various federal agencies and from mail surveys. Data is presented for each kind of business or operation classified (unless disclosure rules apply) and includes:

1. Number of establishments
2. Annual sales or receipts
3. Annual payroll
4. First quarter payroll
5. Paid employees for pay period including March 12th

METHOD

GENERAL DESCRIPTION OF MODELLING OR ESTIMATING PROCESS

Methodology for Estimates

Because the census data applies to 1982 it was necessary to develop a procedure which would both update the information and also provide a basis for forecasting future levels of sales and receipts. The procedure involved two steps:

1. Extrapolation to 1985. Because 1985 is the last year with complete data on many major economic variables it serves as the starting point for this analysis. The Alaska Department of Labor prepares the Statistical Quarterly, a publication which presents industry specific data (SIC codes) on a number of reporting units, payroll and average wages. After some refinements for differences in census and labor coverage, labor data for the period 1982-85 was used to estimate 1985 levels of census variables.
2. Projection to future years. The level of retail sales estimated for 1985 was expressed as a percentage of personal income in that year. A separate forecast of personal income for future years was used along with this percentage to approximate the level of retail sales for the forecast period. This approach assumes that the relationship of retail sales to personal income will not vary dramatically. Because there is considerable variation among sales tax states in the treatment of services these values were not projected forward. An examination of the 1985 levels provides an indication of potential revenues obtainable from taxes on various categories of services.

FOOTNOTES

- (1) Petroleum Revenue, Alaska Department of Revenue, December 1986
- (2) Ibid.
- (3) 1982 Tax Capacity of the Fifty States, Advisory Commission on Intergovernmental Relations, May 1985.
- (4) Ibid.