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ABSTRACT

Alaska faces a problem that is easy to explain but hard to solve: state government is spending more than it collects. The budget crisis looms because oil production, which supplies 85% of the state's general fund revenues, will soon begin to fall as the Prudhoe Bay oil field is depleted. This paper examines the potential deficit and the effect it will have on Alaskans. It considers four possible ways to deal with the fiscal gap from the present to 2010: (1) stumble from year to year; (2) deplete the permanent fund; (3) freeze the budget; or (4) cut spending and raise taxes. Only economic effects, not political difficulties, are considered. Under each scenario effects on revenues, expenditures, employment, economic well-being, and the permanent fund are examined. Decisions are discussed in the areas of (1) current versus future spending and economic activity; (2) public versus private spending; (3) gradual versus abrupt transition; and (4) public versus private economic activity. The effects of the decisions may fall on different areas of the state, different segments of the population, and at different times, depending on the choices made. Although these decisions are political, they can best be made using information about the implications of different choices. (DHP)

No. 1, August 1989

ISER FISCAL POLICY PAPERS

Institute of Social and Economic Research — University of Alaska Anchorage

THE ALASKA FISCAL GAP

by Oliver Scott Goldsmith

Alaska faces a problem that will be very tough to solve but is easy to explain: state government is spending more than it collects. The problem will get much worse as time goes on. If state general fund spending stays at the current level of $2.25 billion (in 1989 dollars), we face a fiscal gap—the difference between current spending and projected revenues—that could soon grow to $1 billion annually.

This budget crisis looms because oil production, which supplies 85 percent of the state's general fund revenues, will soon begin dropping as the huge Prudhoe Bay oil field is depleted. Likely new petroleum production, higher oil prices, and other economic activity in the coming decade won't be able to generate nearly enough tax and royalty income to replace the loss of Prudhoe Bay production.

Figure 1 shows projected oil production and state petroleum revenues over the next 20 years, based on the Alaska Department of Revenue's estimates from producing fields and our own estimates of new field production and per barrel revenue. Production is at its peak and will soon begin a long decline. Even assuming production from new fields such as West Sak—the timing of which is uncertain—production in 2000 will be only half of what it is today. Petroleum revenues have already fallen to just half of what they were in the early 1980s, because oil prices are much lower now. If the real price of oil remains in the range where it has been for the last few years, petroleum revenues will drop by half again by 2000.

This figure does not include potential production and revenues from oil fields that may exist in the Arctic National Wildlife Refuge (ANWR). Such revenues would of course help reduce the budget shortfall in the next century. But under any reasonable assumptions (see the box on page 4) they would fall far short of revenues we've enjoyed from Prudhoe Bay, and could not reverse the downward trend. Also, future production from ANWR is extremely speculative right now. Congress would first have to open the refuge to exploration and oil companies would have to discover commercial quantities of oil; after such discoveries it would take years to bring new fields into production.

THE FISCAL GAP

How shrinking production and revenues translate into trouble for Alaska is apparent in Figure 2. It shows the potential size of the future gap

This is the first in a series of *ISER Fiscal Policy Papers* that will examine aspects of state government spending. We intend these papers to focus the attention of state officials and of Alaskans in general on the serious budget crisis we face, and on the necessity for dealing with it soon. We hope this and later papers will provide policymakers with information and analysis they will need when making the difficult decisions ahead.

The author, Oliver Scott Goldsmith, is professor of economics with ISER. He has fourteen years of experience examining state spending. Lee Gorsuch, ISER director, is responsible for the design and presentation of this series. Linda Leask edited the paper.

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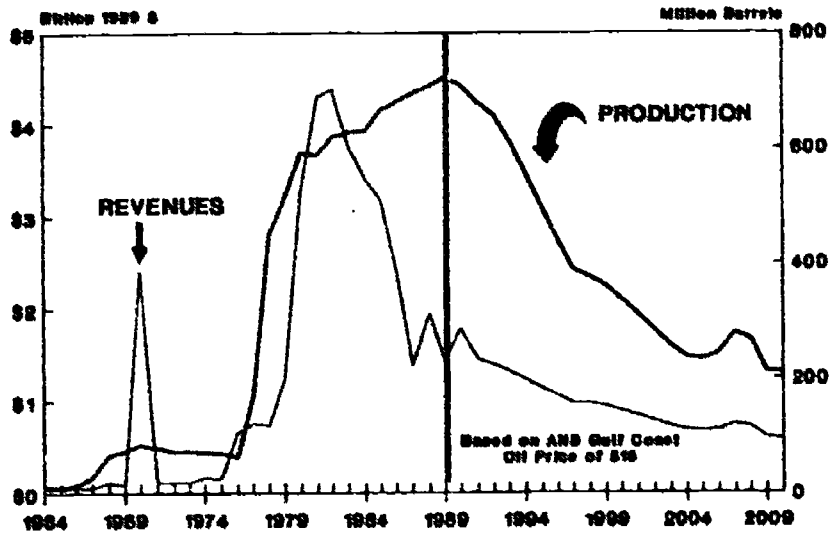
FIGURE 1. PROJECTED ALASKA PETROLEUM REVENUES AND PRODUCTION



between general fund revenues and spending. If annual spending were held at its current level of about $2.25 billion (in 1989 dollars), the gap between spending and revenues could be several hundred million dollars a year in the early 1990s and more than $1 billion annually after the turn of the century. If future revenues turn out to be larger than we anticipate, the fiscal gap could be reduced for a short time but the overall picture would be the same. (See the box on page 4 for a description of how our results would change under different assumptions about future developments and other factors.)

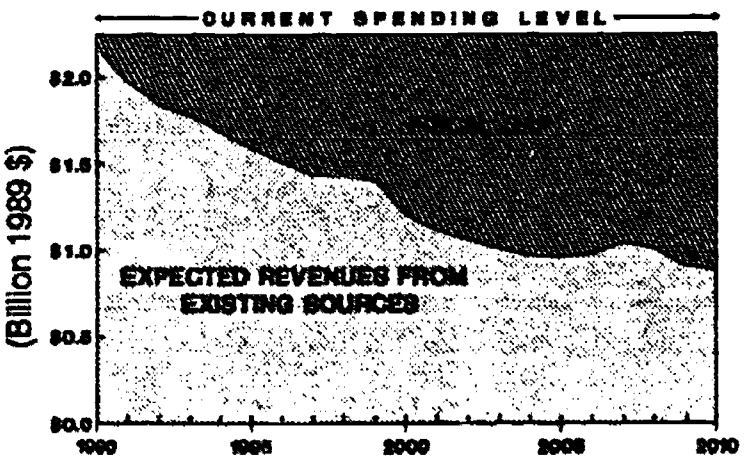
Such a gap of course can't persist. We'll have to balance the budget by cutting spending, raising taxes, using savings, or some combination of the three. These changes will affect not only those who currently enjoy state services, work for state government, or pay taxes. Everyone who benefits from local government services like schools and street maintenance will also be affected. Budget cuts will also affect recipients of government transfers—including Permanent Fund dividends—and businesses that depend on the purchasing power provided by a large public sector.

Balancing the budget will affect all Alaskans, because the economy and people of Alaska are dangerously dependent on state government spending financed by oil revenues. Even now, after several years of recession and a precipitous drop in revenues, state government spending still accounts directly and indirectly for more than one in four Alaska jobs.

Below we look at four possible ways to deal with the fiscal gap between now and the year 2010. Briefly, our four cases are: (1) Stumble From Year to Year; this case assumes that the state tries to maintain current spending for as long as possible by using all available reserves except the principal of the Permanent Fund and then cuts spending to match reduced revenues. (2) Deplete the Permanent Fund; this case examines what would happen if the state maintained the current budget level by spending the principal of the Permanent Fund. (3) Freeze the Budget; this case looks at how the fiscal gap would be affected if the state did not adjust the budget for inflation—in effect cutting the budget by the annual rate of inflation. (4) Cut Spending and Raise Taxes; this case describes the combined effects of reducing state spending, reimposing the personal income tax, and eliminating the Permanent Fund dividend.

There are other possible combinations, but these four scenarios include the main options available to the state. We do not discuss, nor have we attempted to analyze, the enormous political difficulties inherent in exercising any of these options. Some would require changes in law or even amendments to the Alaska constitution. All would generate intense public debate, and most

Figure 2. PROJECTED STATE FISCAL GAP*
(Difference Between Revenues and Spending)



*Projected at the current level of state general fund expenditures. Revenues include oil settlement estimate.

REAL VS. INFLATED DOLLARS IN FISCAL ANALYSIS

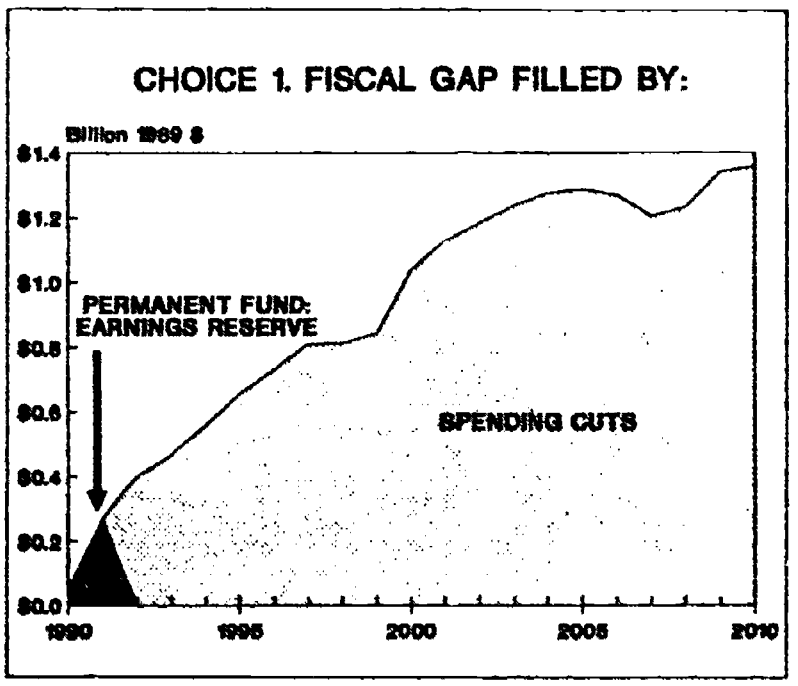
For simplicity and clarity all revenues and expenditures are presented in 1989 dollars. Using this technique eliminates the need to estimate the rate of inflation—the value of which has only a marginal effect on the rest of our analysis—and avoids the confusion that inflation can introduce when we try to compare the purchasing power of dollars received at different times. For example, $1 of revenue collected in 2000 would have the purchasing power of just 61 cents, if inflation were 5 percent annually over the next decade. Our use of 1989 dollars throughout the analysis allows direct comparisons of current and future purchasing power.

The use of real dollars also corrects a misinterpretation that can arise in revenue projections that use nominal dollars. In such projections, the inflation-proofing portion of Permanent Fund earnings can appear to be a source of recurring revenues. In fact, inflation-proofing is just the portion of earnings needed to offset the devaluation of the fund principal by inflation. Because we use real dollars in our analysis, inflation-proofing does not appear as a separate revenue source, and we avoid any potential misinterpretation. This assumption does not preclude the policy option of appropriating inflation-proofing to fund government spending.

would face extremely strong opposition from specific groups or from Alaskans in general. This paper does not endorse any particular strategy to balance the budget. Rather, it describes in general the tradeoffs—who bears the pain—and the ramifications of the various choices.

Doing an analysis like this requires making certain economic assumptions. Those assumptions are summarized in the box on page 4 and in the individual case descriptions. We can't be sure that these assumptions will prove correct, but changing those assumptions in any reasonable way would not substantially alter our findings.

FISCAL CHOICE 1: STUMBLE FROM YEAR TO YEAR



In this case we look at what would happen if the state government budgeted from year to year, trying to maintain the current level of spending ($2.25 billion in 1989 dollars) for as long as possible, using available fund balances but making no changes in current fiscal policies. The dividend program would not be changed, the principal of the Permanent Fund would be retained, and no new tax measures would be enacted.

Revenues from the settlement of disputes with the oil companies over past royalty and tax payments, as well as with the federal government over ownership of leases in the Beaufort Sea, are an important element of our revenue estimates for the 1990s. The amount and timing of any settlement money the state might receive is extremely uncertain, but we assume for this and the other cases that the settlements occur regularly over the next decade in an amount equivalent to $1.7 billion today. (See also the box on page 4 for an example of how changing this settlement total would change the analysis.) In reality the state may not be so fortunate as to receive a steady stream of income from this source, and the budget shortfall would pressure the state to accept quick negotiated settlements in these disputes.

Under these conditions, the Railbelt Energy Fund, the Earnings Reserve Account of the Permanent Fund, and other fund balances could balance the budget for a short time. A fiscal gap of $400 million would open in 1992 and grow to an annual deficit of $1 billion by 2000. In this scenario, state government and the economy would adjust to reduced state spending as discussed below and shown in the graphs on page 7.

Permanent Fund: The Permanent Fund would remain just about the same size (inflation-proofed) that it is today. Contrary to popular belief, future earnings of the Permanent Fund will not be able to replace petroleum revenues in the support of state government. Annual additions to the fund from petroleum revenues—which the state constitution currently requires go directly to the principal of the Permanent Fund—plus earnings would largely be consumed by the Permanent Fund dividend program, with little or nothing left

ECONOMIC ASSUMPTIONS USED IN ANALYSIS

If we changed the economic assumptions used in this analysis, the rate at which the fiscal gap grows would be different but the options for dealing with the gap would be the same. To focus on those options we held the economic assumptions constant throughout the four cases. The most important assumptions are listed below. (Full details on the assumptions are available from the author.)

OIL PRODUCTION: Alaska Department of Revenue estimate, Spring 1989, plus West Sak production scenario developed by author (oil companies recently announced postponement of West Sak exploration)

OIL PRICE: Gulf Coast delivered price for Alaska North Slope (ANS) crude averages $15 a barrel (in 1989 dollars)

RETURN ON PERMANENT FUND: 3 percent annually, net of inflation

EMPLOYMENT GROWTH RATE: 1.75 percent annually, independent of government spending

SETTLEMENT REVENUES FROM PETROLEUM DISPUTES: $1.7 billion (in 1989 dollars), received over 10 years

TAX REGIME: Reflects the Economic Limit Factor (ELF) as revised by the Alaska Legislature in June 1989

INFLATION RATE: 5 percent annually

RECURRING REVENUES (Non-petroleum revenues): 1 percent growth annually, net of inflation

for fund growth. The total amount available to pay dividends and the payments to individual Alaskans would stay fairly constant because population growth would roughly match growth in the total available for dividends. Dividends as a component of government spending would increase because of decreased spending in all other functional areas.

Revenues: With no new recurring revenues, general fund revenues would steadily decline to about $1.2 billion in 2000. Permanent Fund additions and earnings would remain relatively constant because of the stable size of the fund.

Expenditures: Declining petroleum revenues would force significant budget cutbacks beginning in earnest in 1992. The general fund would need to be cut 18 percent that year to balance the budget. Smaller annual cuts would be the rule over the next two decades. Expenditures in 2000 would be $1.2 billion—equal to revenues collected that year. These cuts in state spending would mean underfunding many and eliminating some government programs; reducing transfers to local governments (creating pressure on local governments to increase taxes and try to shift government functions back to the state); and reducing financial support for individuals. Projected population growth would add to the problem of deciding how the cuts should occur. Uncertainty about the timing and magnitude of cuts from year to year would create continuing confusion and negative attitudes both within government and the private sector.

Alaska Employment: During the next decade 26,000 public and private jobs would be lost as

WHAT IF WE CHANGED THE ASSUMPTIONS?

A question likely to be asked is: How much longer could we maintain current spending if revenues turned out to be greater than we have assumed? If we used up the entire Permanent Fund (as discussed in Case 2), we could maintain current spending up until 2003. Alternate assumptions would add to the number of years that the current spending level could be maintained as follows:

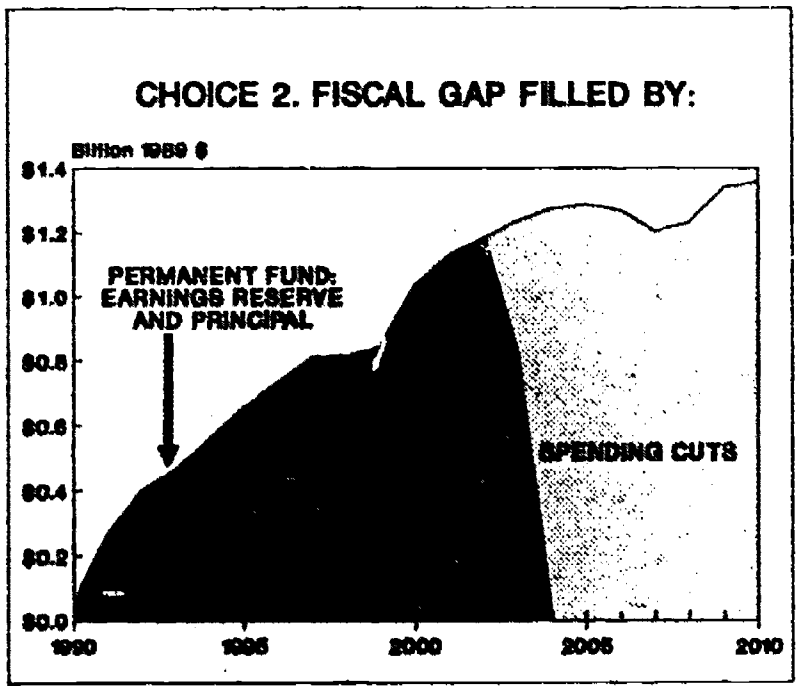
$1 increase in the price of oil	1 year
Gas pipeline in the 1990s	1 year
ANWR production shortly after 2000	1 year
Petroleum settlements of $3.4 billion	2 years

Another likely question is: What would be the cost of a one-year delay in closing the fiscal gap? Our analysis in Case 4 indicates that the state can sustain annual spending of about $1.45 billion (in 1989 dollars) based on the current tax regime, compared with the current spending level of $2.65 billion (including the approximately $400 million paid in Permanent Fund dividends). The difference between current and sustainable spending—$1.2 billion—approximates the loss in state fiscal assets associated with each year of delay in closing the gap.

state general fund spending was cut virtually in half. (For simplicity we assume public sector jobs would be eliminated in proportion to the budget cuts. Wage rate reductions could partially offset this job loss. We also assume that local governments do not raise taxes in response to less state fiscal support.) The drag on the economy created by a job loss of this magnitude would make it difficult if not impossible for the economy to grow, even assuming the private sector could generate new jobs at about the same rate projected for the national economy—1.75 percent annually. Total employment in Alaska in 2000 would be only slightly above what it is today.

Economic Well-Being: Annual percentage changes in employment would hover near zero for most of the next 10 years, with a dramatic drop when government spending was first reduced in 1992. Per capita general fund government spending would fall about 5 percent annually through most of the next 20 years.

FISCAL CHOICE 2: DEPLETE THE PERMANENT FUND



Another strategy for dealing with the budget crisis—the most drastic and one which would require an amendment of the Alaska constitution—would be to use the entire $10 billion in the Permanent Fund to plug the fiscal gap and keep spending at $2.25 billion (in 1989 dollars) for as long as possible. We do not endorse this strategy, but include it to cover the range of options available to the state. Under this scenario, the portion of Permanent Fund earnings now used to protect the principal of the fund from inflation would be spent, as well as the principal of the fund itself.

The first draw—$400 million from inflation-proofing—would be required in 1992. Within two years, however, we would begin taking from the principal of the fund, and the withdrawals would grow rapidly—topping $1 billion for the first time in 2000. The fund principal would be drawn down faster as time went on not only because of the growing fiscal gap but also because the shrinking Permanent Fund would generate less earnings each year. Under this scenario, the effects would be as discussed below and shown in the graphs on page 8.

Permanent Fund: More than $6 billion from the Permanent Fund would be needed to fill the budget gap between 1992 and 2000. The last year of withdrawals would be 2003, when the Permanent Fund would be depleted. The Permanent Fund dividend would be an additional casualty, declining each year as the fund shrank and disappearing when the fund disappeared.

Revenues: Revenues flowing into the general fund would be the same as in Case 1, but the use of Permanent Fund earnings and principal would disguise the shortfall until 2003, when the Permanent Fund would be gone. By 2005, revenues would be about $1 billion—60 percent less than the level expected in 1990. The additions and earnings of the Permanent Fund would fall as the fund itself shrank.

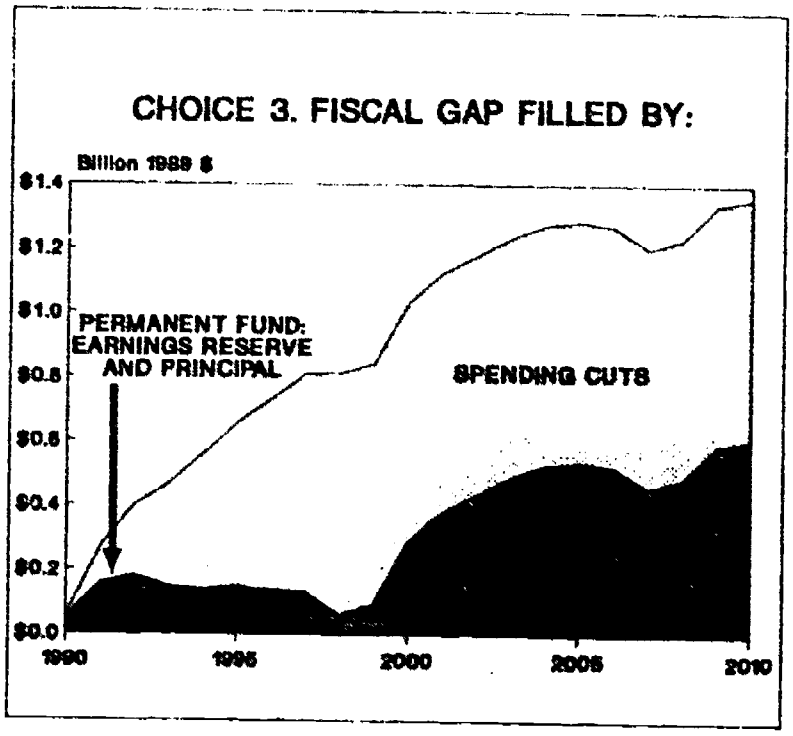
Expenditures: The Permanent Fund would prop up expenditures until 2003. Then a massive "forced transformation" of the public sector and the entire Alaska economy would occur because of the sudden drop in state general fund spending—from $2.25 billion to $1 billion in just two years. All public services at the state and local levels would suffer dramatic cutbacks.

Alaska Employment: Extreme dislocation and a serious economic recession would start in 2003. About 30,000 jobs—both public and private—supported by general fund spending would disappear over a two-year period. (To put such a drop in perspective, job loss during the 1985-1988 recession was about 25,000.) Even assuming

private industry would continue to generate jobs at the rate of 1.75 percent annually, by 2010 Alaska would still not have replaced all the jobs lost during the recession.

Economic Well-Being: Alaska employment would increase through 2002 because of growth in the private economy and constant general fund government spending. In the following two years, 12 percent of total state jobs would disappear. Despite constant government spending through 2002, per capita state general fund spending would decline because private economic growth would be drawing people to Alaska. Per capita state general fund spending would be cut nearly in half when the "forced transformation" occurred.

FISCAL CHOICE 3: FREEZE THE BUDGET



The forced transformation of the public sector and the severe recession described in Case 2 could be mitigated under a scenario in which the budget was held constant in nominal dollars—that is, not adjusted for inflation. Such a strategy would reduce the purchasing power of the budget each year by the rate of inflation.

The average annual rate of inflation in the coming years is expected to be in the neighborhood of 5 percent. If the budget were not adjusted for that inflation, the real dollar value (the effective purchasing power) of the budget would fall by 5 percent each year. If the state government implemented a constant budget policy starting in 1991, the budget could be reduced to an arbitrary target level of $1.5 billion (in 1989 dollars) by 1998.

A gradual policy like this would require a large amount of political discipline, but it would have several attractive features--even though it would not entirely solve the state's long-term fiscal problem. Public programs could be phased out on the basis of plans developed to minimize the effects of the budget reductions. The economy would not suffer the kind of massive shock described under Case 2, when state spending would be reduced by half in just two years. The effects of using inflation to cut the budget are discussed below and shown in the graphs on page 9.

Permanent Fund: This strategy at first glance appears to preserve the Permanent Fund, since the balance would hold relatively constant for several years after budget cuts ended. It would require use of portions of the annual appropriations for inflation-proofing during the 1990s. After 2000 continuing declines in revenues would force significant withdrawals from principal. By 2010 the fund principal would be only about $3.5 billion, as compared with $10 billion today. As the Permanent Fund shrank, the amount paid out as dividends would also fall off.

Revenues: General fund revenues would be the same as in Cases 1 and 2. The spending reductions would not be sufficient to produce a general fund surplus; such a surplus could in itself be a new source of earnings. Additions and earnings of the Permanent Fund would taper off after 2000 as the principal of the fund was spent.

Expenditures: State expenditures would fall off gradually but steadily each year until 1998 and then hold steady at $1.5 billion through the next decade—but only because we would be using the principal of the Permanent Fund to supplement other revenues. After 2010 the Permanent Fund would be used up and a smaller "forced transformation" of the public sector and the economy would occur. Under this scenario, dramatic cuts in state spending—as much as 40 percent—would be forced by 2015 (not shown on the graph).

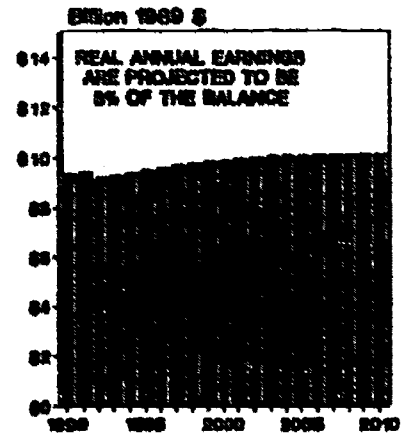
(Text continued on page 11)

Fiscal Choice 1: Stumble from Year to Year

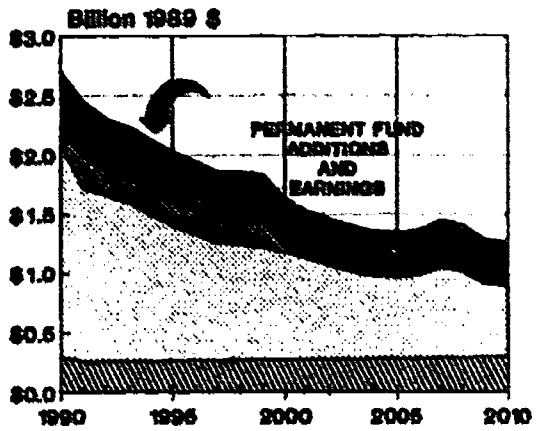
CASE ASSUMPTIONS

- SPENDING: General Fund spending based on availability of revenues up to $ 2.25 billion (1989$)
- TAXES: No new taxes
- DIVIDEND: Retain Permanent Fund dividend
- PERMANENT FUND: Leave Permanent Fund principal intact, continue contributions and inflation proofing, spend earnings reserve account
- OIL PRICE (constant across cases): Average ANS Gulf Coast oil price $15 (1989$)
- SETTLEMENTS (constant across cases): $1.7 billion of oil settlements collected and spent over 10 years

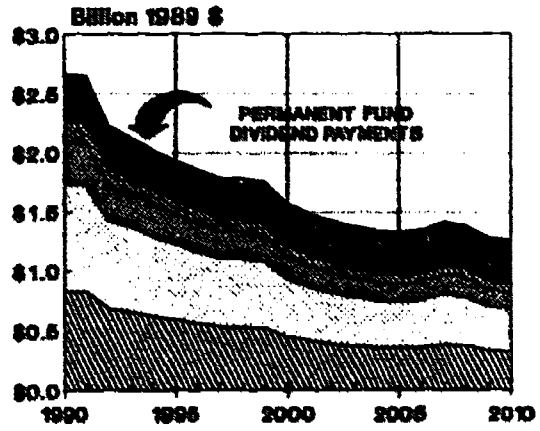
PERMANENT FUND BALANCE



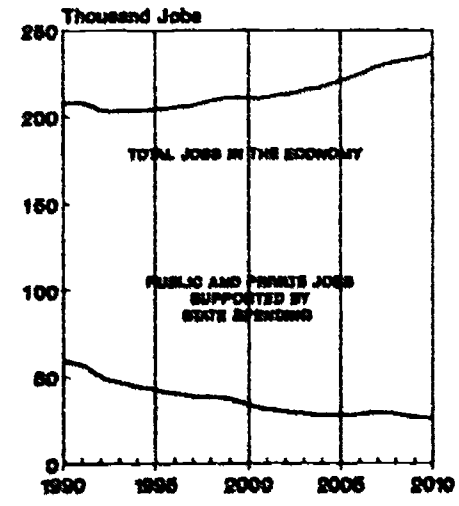
STATE GOVERNMENT REVENUES (Permanent Fund Included)



STATE GOVERNMENT EXPENDITURES (Dividend Included)

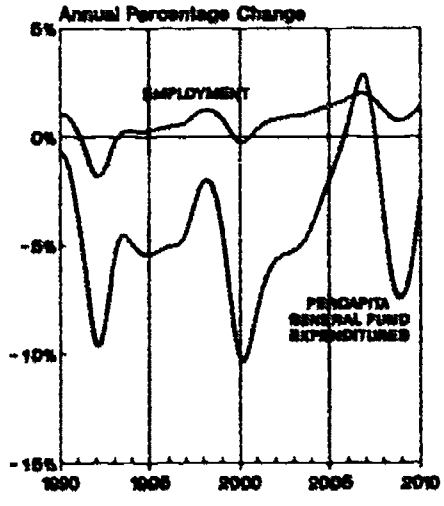


ALASKA EMPLOYMENT



Wage and Salary Employment Only

ECONOMIC WELL-BEING

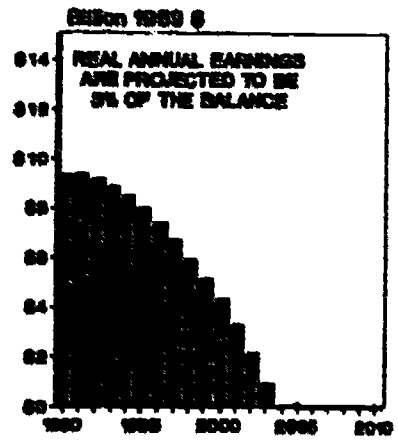


Fiscal Choice 2: Deplete the Permanent Fund

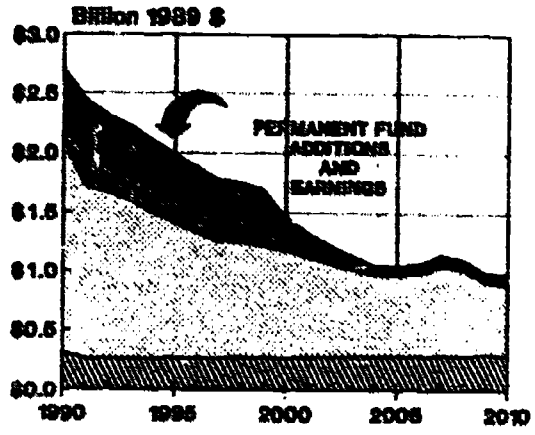
CASE ASSUMPTIONS

- SPENDING: General Fund spending based on: availability of revenues up to $ 2.25 billion (1989$)
- TAXES: No new taxes
- DIVIDEND: Retain Permanent Fund dividend
- PERMANENT FUND: Use Permanent Fund principal to maintain spending as long as possible
- OIL PRICE (constant across cases): Average ANS Gulf Coast oil price $15 (1989$)
- SETTLEMENTS (constant across cases): $1.7 billion of oil settlements collected and spent over 10 years

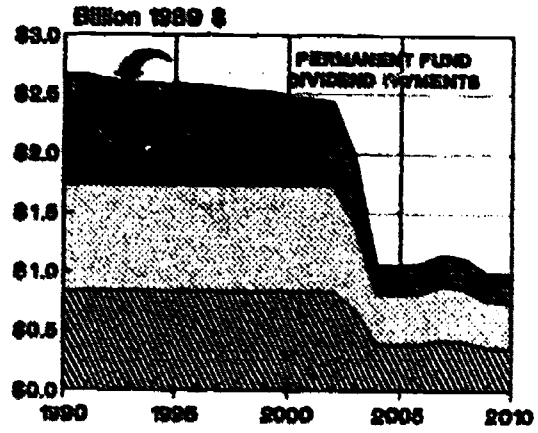
PERMANENT FUND BALANCE



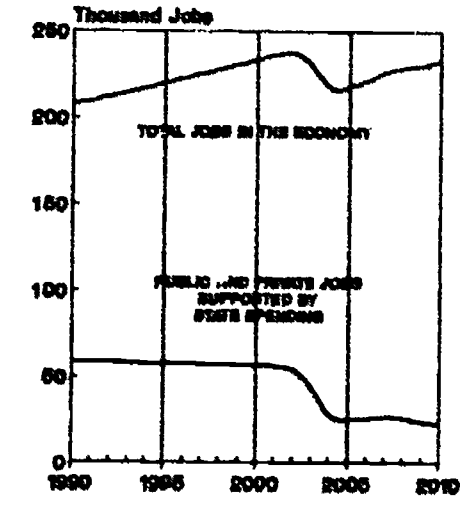
STATE GOVERNMENT REVENUES (Permanent Fund Included)



STATE GOVERNMENT EXPENDITURES (Dividend Included)

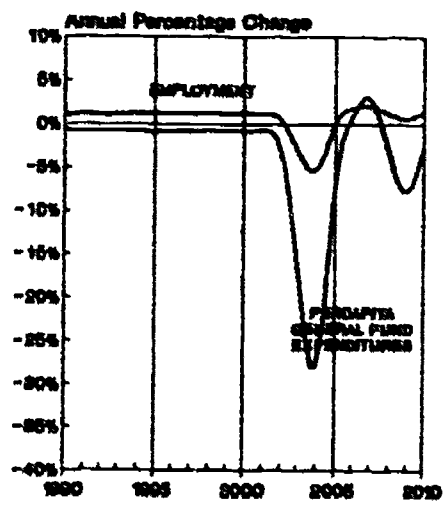


ALASKA EMPLOYMENT



Wage and Salary Employment Only

ECONOMIC WELL-BEING

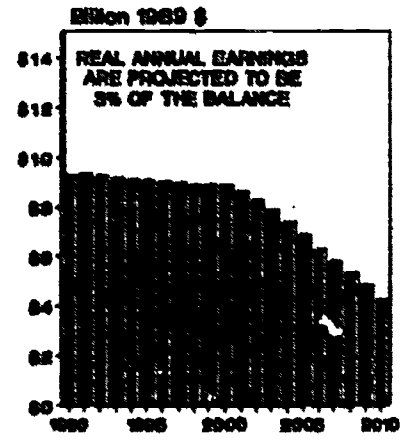


Fiscal Choice 3: Freeze the Budget

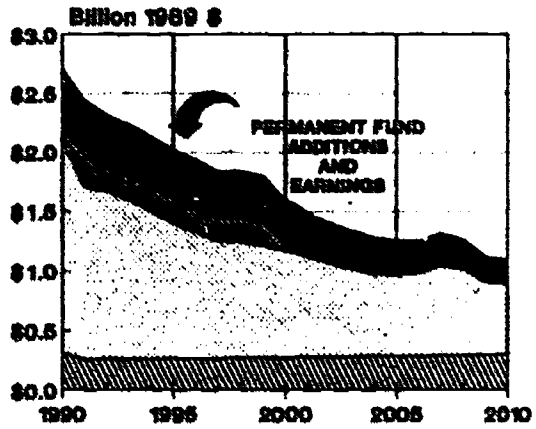
CASE ASSUMPTIONS

- SPENDING: General Fund spending constant in nominal dollars from 1991 to 1998. (The budget declines to a target of $1.5 billion in 1989$)
- TAXES: No new taxes
- DIVIDEND: Retain Permanent Fund dividend
- PERMANENT FUND: Use Permanent Fund principal to maintain spending at targeted level as long as possible
- OIL PRICE (constant across cases): Average ANS Gulf Coast oil price $15 (1989$)
- SETTLEMENTS (constant across cases): $1.7 billion of oil settlements collected and spent over 10 years

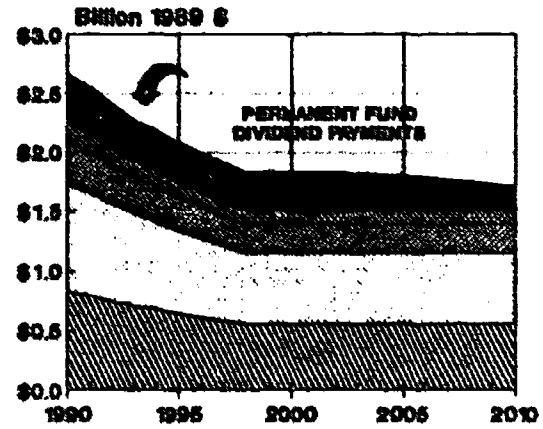
PERMANENT FUND BALANCE



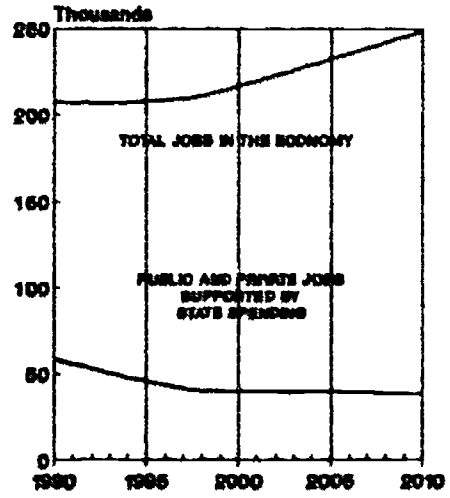
STATE GOVERNMENT REVENUES (Permanent Fund Included)



STATE GOVERNMENT EXPENDITURES (Dividend Included)

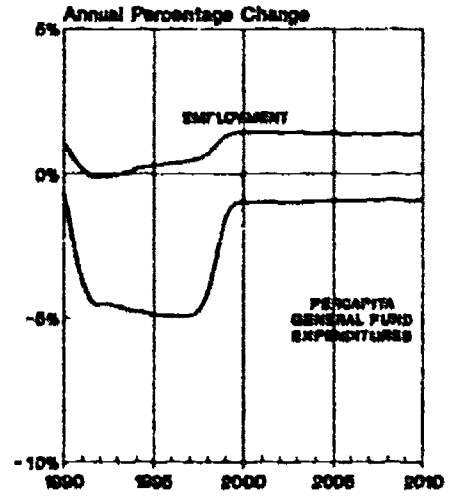


ALASKA EMPLOYMENT



Wage and Salary Employment Only

ECONOMIC WELL-BEING

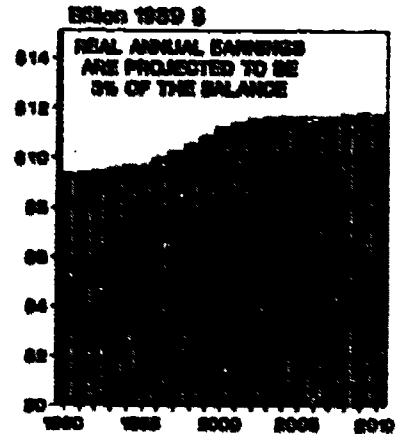


Fiscal Choice 4: Cut Spending and Raise Taxes

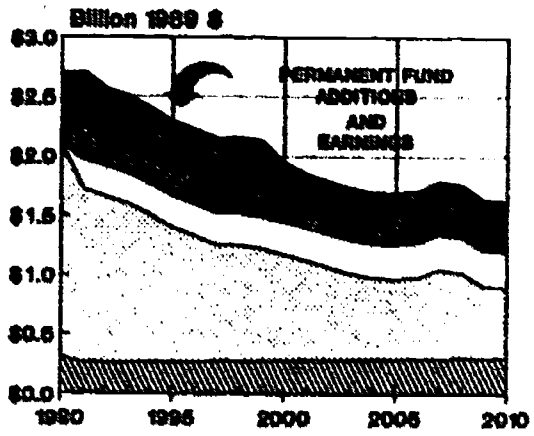
CASE ASSUMPTIONS

- SPENDING: General Fund spending is reduced 2.5% annually (1989$) from 1991 to 2000. (The budget declines to a target of $1.7 billion in 1989$)
- TAXES: Personal income tax reimposed in 1991
- DIVIDEND: Permanent Fund dividend eliminated in 1995
- PERMANENT FUND: Leave Permanent Fund principal intact, continue contributions, spend earnings reserve account. Appropriate real earnings to General Fund. Use inflation proofing to fill revenue gap.
- OIL PRICE (constant across cases): Average ANS Gulf Coast oil price $15 (1989$)
- SETTLEMENTS (constant across cases): $1.7 billion of oil settlements collected and spent over 10 years

PERMANENT FUND BALANCE



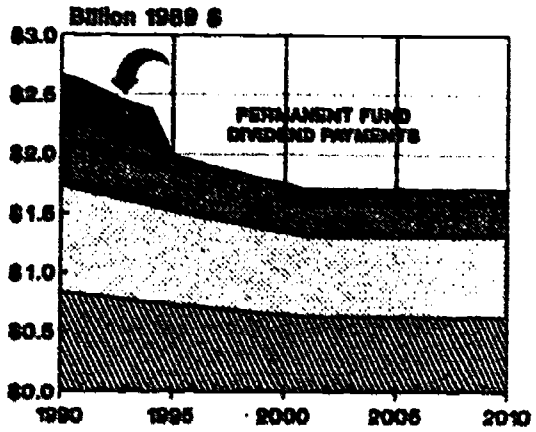
STATE GOVERNMENT REVENUES (Permanent Fund Included)



GENERAL FUND REVENUES

RECURRING
OIL
INC TAX
SETTLEMENTS

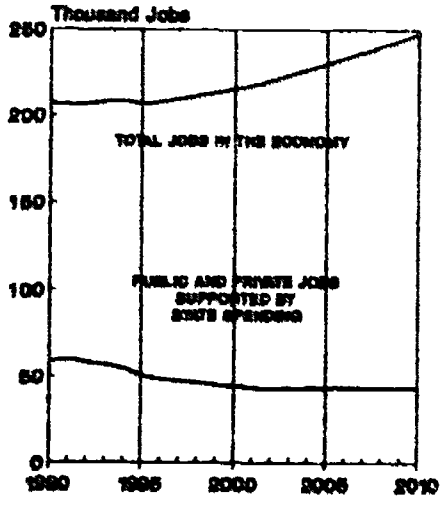
STATE GOVERNMENT EXPENDITURES (Dividend Included)



GENERAL FUND CATEGORIES

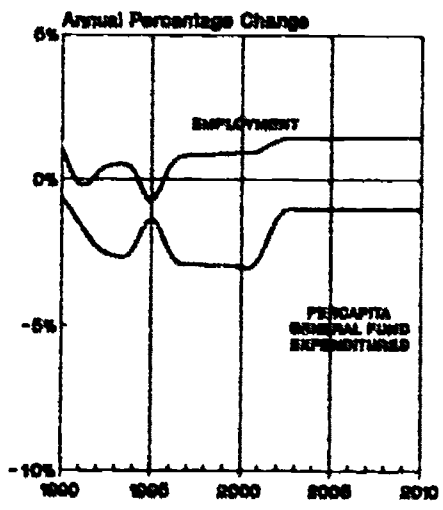
AGENCY
FORMULA
OTHER
CAPITAL

ALASKA EMPLOYMENT



Wage and Salary Employment Only

ECONOMIC WELL-BEING

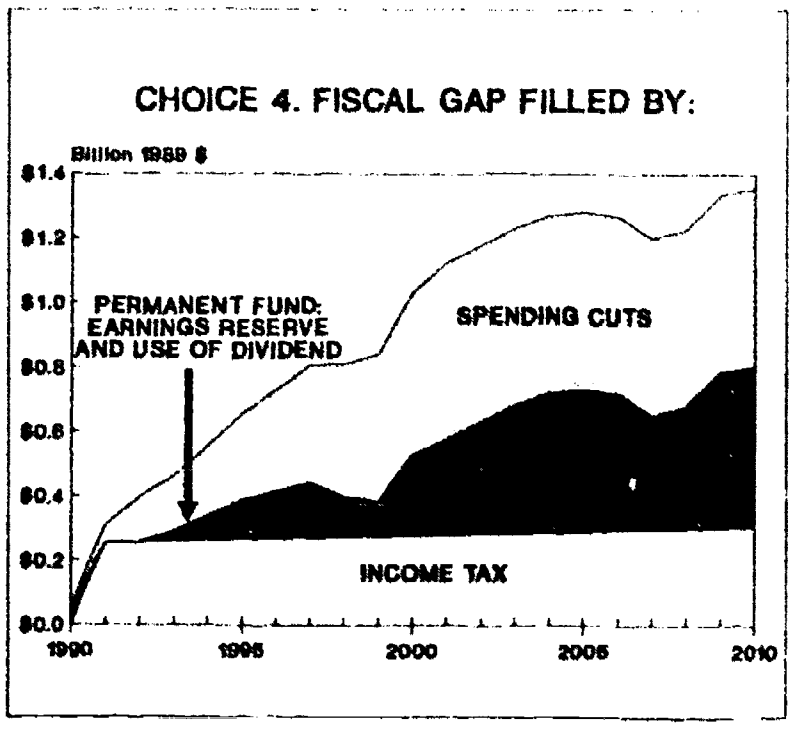


(Text continued from page 6)

Alaska Employment: The number of public and private jobs supported by state spending would suffer gradual attrition throughout most of the 1990s, dropping by about 20,000 over the decade. Private industry would be hard pressed to replace those jobs that had been supported by state spending. Total Alaska employment would stagnate until 1995 and only then begin a gradual increase. However, after 2010, when state spending dropped off very abruptly, a shock wave would again travel throughout the economy, eliminating public and private sector jobs and precipitating another recession.

Economic Well-Being: There would be little year-to-year change in Alaska employment until the late 1990s. In the following decade, modest growth in the private sector combined with stable public employment would result in small annual increases in employment. Per capita general fund state spending would decline every year for the next two decades, but the drops would be smaller after the 1990s. Again, both per capita state spending and employment would suffer after 2010, when state spending dropped sharply.

FISCAL CHOICE 4: CUT SPENDING AND RAISE TAXES



The cumulative budget reductions described in the first three cases, combined with the elimination of the Permanent Fund in the second and third, may be more than Alaskans are willing to endure. An alternative to those kinds of reductions would be for the state government to use new sources of revenues. The most likely sources are a personal income tax and the earnings of the Permanent Fund that now finance the dividend program. Those two together could contribute $650 million annually – $250 million from the income tax and $400 million from the dividend program – to the general fund. In this scenario, we look at what would happen under one possible combination of these two new revenues. We assume the income tax is reimposed in 1991 and that beginning in 1995 the revenues now used to fund the Permanent Fund dividend program are instead used to supplement general fund revenues.

The state would still need to cut the budget, because at the current level of spending the fiscal gap would soon exceed the $650 million generated by these new revenue sources. Furthermore, cutting the budget at the same time new revenues were added would distribute the pain between the taxpayers and the beneficiaries of public spending.

Our analysis suggests that the state is spending $1.2 billion more annually than it can support in the long run, without an income tax ($800 million in general fund spending and $400 million in dividends). If we chose to reimpose the income tax and use the earnings of the Permanent Fund to support public spending, sustainable revenues would increase $650 million annually and $550 million in non-sustainable spending would remain. Thus the general fund budget would need to be cut to $1.7 billion – about a 25 percent reduction. In combination with the revenue generating measures, such a budget cut would eliminate the fiscal gap not only in the 1990s but into the following decades as well – and the Permanent Fund would remain intact.

Depending on when the state receives settlements in tax and other disputes, this scenario might require budget cuts in years of increasing revenues. The state would intentionally collect more than it spent – thus setting aside a small balance of settlement reserves to smooth the transition to a smaller budget. Although that might be a rational decision when we consider the projected revenue decline in the later years, the plan would be tough to justify in the short run, particularly in the presence of fluctuating oil

prices. The effects of this fourth scenario are discussed below and shown in the graphs on page 10.

Permanent Fund: The principal of the Permanent Fund would grow slowly through the next two decades, with the addition of revenues from petroleum and withdrawals only of real earnings to fund government. The fund would have a continuing capacity to generate real earnings of $400 million annually that could be used to support public spending. Individual Alaskans would, however, lose their annual dividends in 1995.

Revenues: Even with the addition of new revenues from the income tax, total general fund revenues would still fall under this scenario, because the new taxes would not completely offset lost petroleum revenues. But the drop would not be as dramatic as in the other cases—revenues independent of the Permanent Fund would be $1.5 billion in 2000 and fall to $1.25 billion in 2005. As noted above, the Permanent Fund would produce about $400 million in real earnings annually, some of which could be reinvested in early years.

Expenditures: Annual budget reductions would continue for 10 years, cutting expenditures by 25 percent over the decade. (If the annual rate of inflation averaged 5 percent, then the budget in nominal dollars would be increasing at 2.5 percent in this case.) These cuts would of course reduce the level of government services, but the reductions would be much more gradual than in the other cases we've looked at. After 2000 expenditures could be maintained at the target level indefinitely.

Alaska Employment: About 12,000 public and private jobs supported by general fund spending would disappear as state spending declined. Another 3,000 jobs would be eliminated when the income tax was reimposed and 5,000 more when the dividend program ended. Although the rate of job loss from these government actions over a 10-year period would be gradual, private industry would have to create new jobs at a rate greater than 1.75 percent annually to produce significant total employment growth before 1996.

Economic Well-Being: The economy would contract when the income tax was reimposed, and again when the Permanent Fund dividend was eliminated. Reimposition of the income tax would draw purchasing power out of the private economy. Elimination of the Permanent Fund dividend would shift purchasing power from an activity with a high multiplier to one with a lower multiplier—because the money would be spent not by thousands of individuals but by government. Per capita general fund spending would decline in the 1990s, but the loss would be less than in the other cases. In contrast, per capita discretionary income of Alaskans (not shown on the graph) would fall in this case due to the reimposition of the income tax and the elimination of the dividend.

TRADEOFFS AMONG STRATEGIES

We have described four ways—all of them painful—of dealing with the fiscal gap. In each case the level of public services—both aggregate and per capita—would fall. In each case the private economy would also suffer, since reduced public spending and transfers and increased taxes would mean less buying power. There is no strategy that would close the fiscal gap without creating pain, because the gap can only be filled by taking from somewhere in the economy.

In each case the pain would be distributed among citizens—present and future—in a different way. Those different distributions are the distinguishing features of each strategy. We recognize, of course, that the effects of balancing the budget will vary among individual Alaskans and in different areas of the state. For example, areas where state spending makes up a larger share of economic activity would be harder hit by budget cuts. Similarly, eliminating or reducing Permanent Fund dividends would affect the pocketbooks of low-income Alaskans more than those with higher incomes, while reimposing the personal income tax would have more impact on those with higher incomes. Despite these individual and regional differences, there are broad kinds of tradeoffs all Alaskans will need to consider; some of these are discussed below.

Present vs. Future Public Spending: If we spend less of our petroleum wealth now, more will remain for future needs—our own or those of

later generations. Should we discount the needs of the future, because such needs are not easily identifiable or because we think the wealth of future generations is currently underestimated? Or should we weight the needs of the future heavily because new public needs are continually being identified, the population is growing, and we may be overestimating future revenues?

Figure 3 shows state spending levels over the next 20 years under our four choices. All the choices show much lower spending by 2010—but how much we spend along the way varies sharply among the choices. Choice 1 and Choice 2 offer the biggest contrast in spending over the next decade; under Choice 1 we would continue current fiscal policy, using all available reserves except the Permanent Fund, while in Choice 2 we would prop up spending by draining the Permanent Fund. Although spending would obviously be much higher under Choice 2 over the next decade, by 2010 spending under both cases would fall to about the same level—but the Permanent Fund would be gone under Choice 2. Choice 3 also would prop up state spending by using the Permanent Fund, but at a slower rate. Spending under Choice 4 would be highest in 2010—but we would maintain that spending level without drawing on the Permanent Fund principal.

Figure 4 shows how each of our four choices would affect the Permanent Fund, our primary repository of oil wealth. The fund and its earning power would not last long if we opted to use the principal to prop up state spending. In Choice 2, the fund would be used up in 2003; in Choice 3 it would dwindle after the 1990s and be gone by 2015. The fund would increase somewhat under both Choices 1 and 4. But under Choice 1 the fund would be left intact while state spending shrank and the state government and the economy floundered from year to year. Under Choice 4, state spending would be stabilized and the economy would not be jolted by continuing spending cuts over 20 years—but it would be stabilized at the cost of a new personal income tax and the elimination of Permanent Fund dividends.

The most straightforward benefit to the average Alaskan from the Permanent Fund has been the annual dividends paid out of fund earnings. Figure 5 shows how dividend payments would be affected under each of our four choices. Under Choice 1, real dividend payments (in 1989 dollars) to each Alaskan would remain fairly constant over the next 20 years, since population growth would roughly match growth in the amount available for dividends. Under Choice 2, the dividends would shrink over the next decade as the principal of the fund was being drawn down and its earnings reduced; the last dividends would be paid in 2004. The attrition of dividends would be somewhat slower under Choice 3, but the result would be the same: shrinking and then disappearing dividends by 2015. Under Choice 4, the dividend program would end in 1995 and the money that formerly went into that program would be shifted over to the general fund.

To conclude our discussion of spending, we should note that in the past decade the state government has spent part of its oil wealth in ways intended to stimulate future economic growth rather than simply to maintain current programs. Many of these ventures have so far had limited success, and it's outside the scope of this paper to assess their value to the state as investments. But to the extent that the state can use its oil wealth to promote economic growth, that kind of spending should be viewed as investment and distinct from spending that simply creates jobs and income in the present.

Present vs. Future Economic Activity: The Alaska recession that followed the "petrodollar boom" of the early 1980s demonstrated that a large portion of the economic activity stimulated by state spending of oil revenues could be sustained only as long as the flow of oil dollars continued. We can continue to spend oil revenues when we receive them, and immediately receive the benefits of the jobs and income produced by that spending. Alternatively, we can postpone spending some of the revenues and receive the economic benefits at some future time. The choice should depend on when those jobs and income will contribute most to the economy and on what we want to save for future generations. Until we make such a choice, the marketplace—essentially the OPEC cartel and the petroleum production cycle—will continue to dictate the booms and busts of our economy.

Figures 6 and 7 show how the number of jobs supported by state spending - including both public and private jobs—and the total number of jobs in Alaska would vary under our four choices. Under Choice 1, the number of jobs supported by

public spending would decline steadily for the next 20 years. Under Choice 2, spending of the Permanent Fund would keep such jobs at about their current level until the fund was exhausted in 2003—then many jobs would be eliminated quickly, and by 2010 there would be about half as many jobs supported by public spending as there are today. Under Choice 3, which involves more gradual use of the Permanent Fund, the number of jobs created directly and indirectly by state spending would drop somewhat by 2010—but not shown on the graph is a very sharp drop that would occur after 2010, when the Permanent Fund was depleted. As with the other cases, the number of jobs supported by state spending would also drop under Choice 4, but the decline would be somewhat smaller and the number of such jobs would stabilize after 2000.

How total jobs in the state—including both those supported by public spending and those by private industry—would fare under each of our choices depends largely on the timing of public spending and on whether the Permanent Fund is depleted. We assume in all cases that private industry in Alaska is able to generate new jobs at an average annual rate of 1.75 percent. Under Choice 1, it would take about 10 years for private growth to offset the job loss from reduced public spending. Use of the Permanent Fund would keep the number of jobs growing under Choice 2—until the fund was used up; then a severe recession would occur. By 2010 Alaska employment would be lowest under Choice 2. Under Choice 3, total jobs would grow slowly but steadily through 2010—but again, not shown on this graph is a sharp decline in jobs that would happen around 2015. Employment under Choice 4 would be slightly lower than under Choice 3, because in that case spending of the Permanent Fund would not be supporting jobs. However, unlike Choice 3, Choice 4 would not involve a recession in 2015.

Public vs. Private Consumption: How much we are able to consume as a state ultimately depends on the productive capacity of our basic industries—petroleum, seafood, tourism, mining, forest products and federal government spending. The split between public and private consumption does not affect this capacity unless government raises taxes so high that private economic incentives are adversely affected. However, the distribution of the benefits does depend on that split. We have argued that the current rate of consumption can't be sustained (because public spending exceeds sustainable public revenues), but we have not suggested what the proper balance is between public and private consumption. Is public consumption in Alaska too large because of historical accident and because the only constraint on public spending seems to have been the availability of revenues? Or should we increase public consumption relative to private consumption to meet the continuing growth in those needs best served through public action? Do we need a large public sector to balance the dominant economic influence of a single commodity? Or does high public consumption hamper diversification in the private sector?

Gradual vs. Abrupt Transition: A gradual transition to a sustainable level of public spending would allow both the public and private sectors to adjust in ways that would minimize the pain from the loss of public services, income, and employment. At the same time, a gradual transition would be very difficult to manage politically and would have a lasting negative psychological effect on the state and population. A quick transition would not leave much time for adjustments and would cause some inefficiencies as public agencies, businesses, and individuals reorganized in the wake of budget cuts. On the other hand, the detrimental psychological effects would be short-lived.

Figure 8 shows the different rates of spending cuts under the four cases. The most drastic would be Choice 2, where state spending would drop by more than half shortly after 2000. Choice 1 would see sharp cuts in the early 1990s and then a continual downward drift for the next 20 years. Choice 3 would result in a fairly stiff drop in the early 1990s followed by relatively stable state spending through 2010—but then another sharp cut in the next decade. Under Choice 4 we'd see small but steady decreases throughout the 1990s but a leveling off after that.

Public vs. Private Economic Activity: Delivering public services requires hiring public employees—teachers, construction workers, office workers—and indirectly generates private employment. Delivering private goods and services requires hiring private employees—clerks, construction workers, office workers. Is the mix

Comparisons Across Fiscal Choices

Figure 3

STATE GENERAL FUND EXPENDITURES

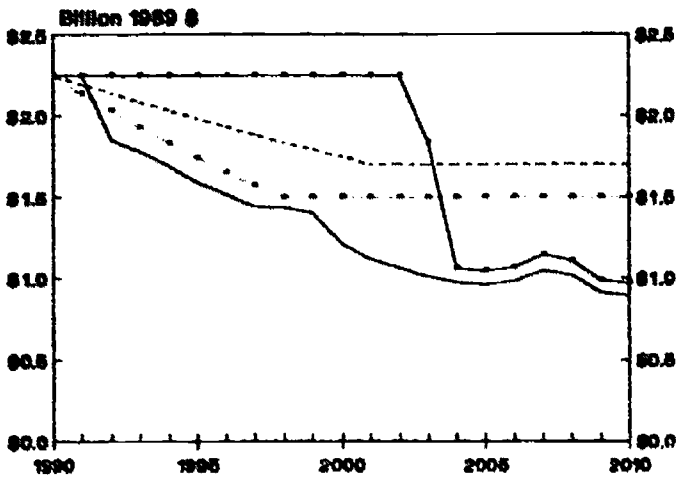


Figure 4

PERMANENT FUND BALANCE

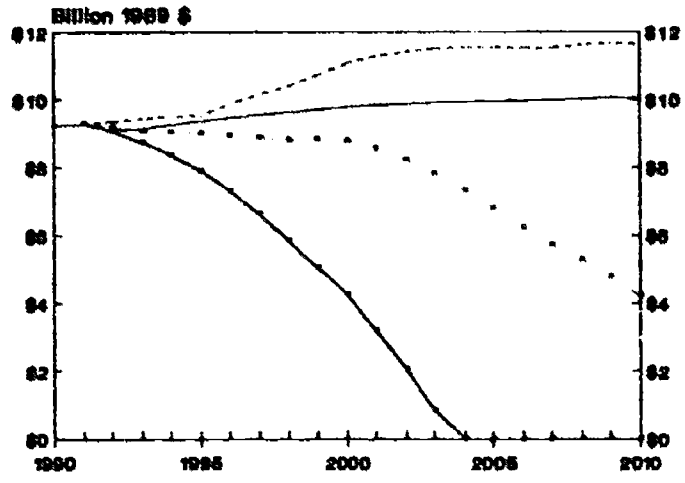


Figure 5

PERMANENT FUND DIVIDEND

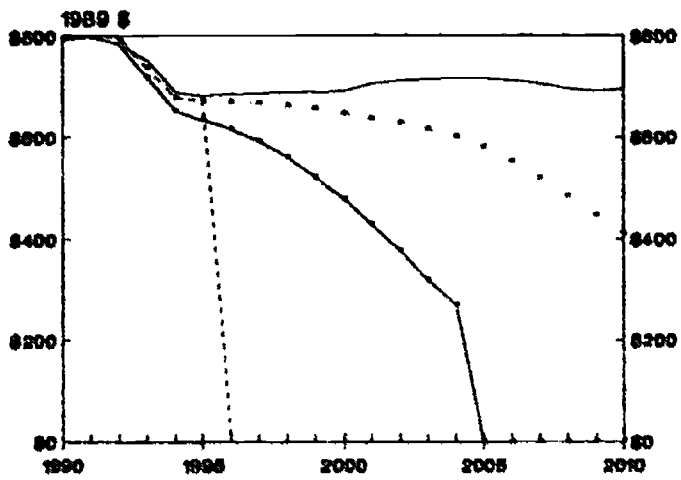


Figure 6

STATE SUPPORTED EMPLOYMENT

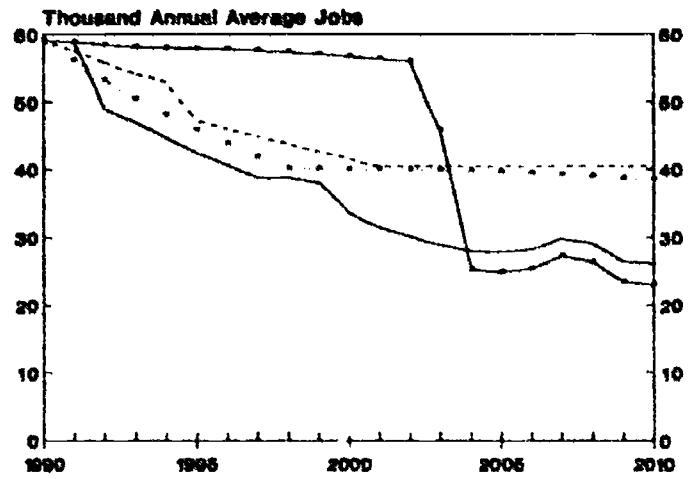


Figure 7

ALASKA WAGE AND SALARY EMPLOYMENT

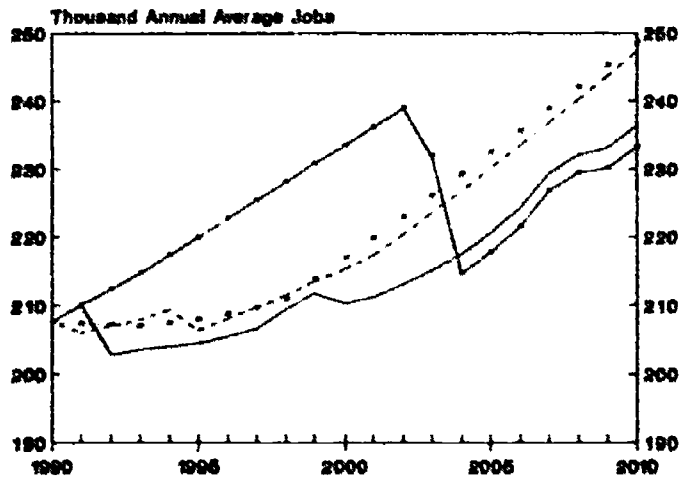
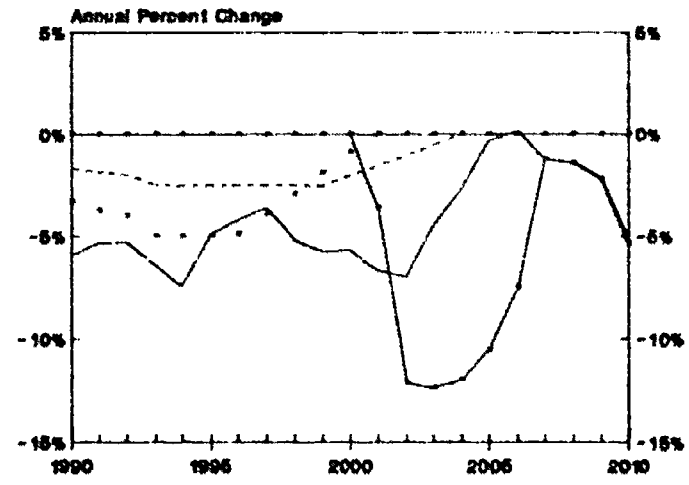


Figure 8

GENERAL FUND SPENDING: YEARLY CHANGE



Values have been smoothed.

SCENARIO

1 STUMBLE ALONG
2 USE PERMANENT FUND
3 BUDGET FREEZE
4 BUDGET CUT & TAXES

of public and private jobs in the economy an important consideration, independent of the mix of goods and services provided?

It would be if the economic multiplier—the capacity of one job to create other jobs—were significantly different for public and private jobs. However, there doesn't seem to be a significant difference between the multiplier effects of public and private jobs, since most of the multiplier effect in the Alaska economy comes from the successive re-spending of income earned as wages and salaries, independent of who writes the checks.

CONCLUSION: A CALL FOR ACTION

These cases show some of the consequences of four different choices for closing the fiscal gap facing Alaska. As we noted at the outset, we have not assessed the political difficulties of putting budget changes into effect—but of course we recognize that enormous difficulties will accompany any such plan. Further, we don't know whether the assumptions we've used in this analysis will turn out to be accurate. But whether the price of oil is higher or lower than we've assumed, or other circumstances are somewhat different than we project, Alaska faces a serious fiscal problem. Despite the uncertainties always inherent in planning for the future, this analysis suggests positive action is warranted—and the sooner it is taken the better.

Differences among the four choices demonstrate that we can influence outcomes and change tradeoffs through public choices. For example, we can choose whether the Permanent Fund will be a lasting asset, throwing off income for future generations of Alaskans, or whether we will spend it to get ourselves through the next decade without sacrifice. We can decide on the mix of current versus future spending, total public versus private spending, and when to take the inevitable hit on the economy. With advance warning, we have an opportunity to plan spending reductions in an orderly fashion.

It is clear that what actions to take are political rather than economic decisions. Nonetheless, each decision will have significant economic consequences. Policymakers need information about the implications of different choices to make informed political decisions. Future issues of this series will seek to enlarge the scope of public information to help in this important public debate.

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