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# Exporting the Alaska Model to Alaska: How Big Could the Permanent Fund Be if the State Really Tried? And Can a Larger Fund Insulate an Oil-Exporter from the End of the Boom?

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**Abstract**

This chapter discusses two questions about the potential for an Alaskan resource endowment: what size resource endowment would have been possible had the state made it a central priority from the start? Part 1 discusses the need for and the potential of resource exporting nations to convert a temporary resource boom into a permanent resource endowment, and Part 2 explains the specifics of the kind of resource endowment system examined in Part 3. Finally, Part 3 finds, under reasonable assumptions the Permanent Fund could have reached \$434.8 billion or more by 2011. It would have \$9 billion available this year [2012]. If it used half of that for dividends, each Alaskan would receive \$12,000, leaving \$8.7 billion for state spending. Moving now [2022] to a strategy of boosting the fund, could

reasonably produce a fund of \$140 billion by 2022. If it used half of that for dividends, each Alaskan would receive \$4,000, leaving \$2.8 billion for state spending. Or if all state spending come from other sources, the dividend could be \$8,000.

If we think of the Alaska model as a resource- or common-asset-based endowment capable of permanently funding a dividend and/or a significant portion of government spending, the combination of the Alaska Permanent Fund (APF) and Permanent Fund Dividend (PFD) embody this model, but only in a small way. Less than one-fifth of the state of Alaska's oil revenue has gone into the APF; Alaska captures a much smaller portion of oil rents than many other oil-exporting nations; and Alaska has not attempted to build any kind of endowment out of most other common assets. Therefore, enormous potential exists to export the Alaska model not only abroad but also back to Alaska.

This chapter discusses two questions about the potential for an Alaskan resource endowment: what size resource endowment would have been possible had the state made it a central priority from the start? Given where the state is now, what are the possibilities for building up a permanent endowment in the future before oil revenues begin to decline? The first of these two questions will be more interesting to other places (such as North Dakota, Mongolia, and South Sudan) just at the beginning of their resource boom and to whatever state or nation might experience the next resource boom. The second question will be more interesting to Alaskans looking ahead to the eventual decline of state oil revenue. Before Part 3 get to these questions, Part 1 discusses the need for and the potential of resource exporting nations to convert

a temporary resource boom into a permanent resource endowment, and Part 2 explains the specifics of the kind of resource endowment system examined in Part 3.

## **1. The potential for a resource endowment**

Chapter 11 argued that most governments can establish a large, permanent resource endowment capable of sustaining both a dividend and a significant portion of regular government spending—perhaps even all of it.<sup>1</sup>

On a temporary basis, several national and regional governments around the world are already financed almost entirely by their common endowment. Over the last 30 years, 85 percent of Alaska's state government revenue comes from the oil fields it owns.<sup>2</sup> Most of the oil-rich states of the Arabian Peninsula have no taxes, funding all or most government activity from resource revenue. Unfortunately, these resource revenue sources are temporary and all of these governments are doing a poor job of turning their temporary revenue streams into permanent endowments.

This situation ought to be distressing. We cannot know that a resource-rich state has escaped the resource curse until the resource boom is over. As I see it, the resource curse can take at least three different forms. First, it can drive up the nation's exchange rate and drive other industries out of business. Second, it can foster corruption, graft, and sometimes dictatorship, so that all or most of the oil revenue is used against the people rather than for their benefit. Third, it can create temporary prosperity for all or most of the people, only to lead to depression and economic deprivation as soon as the resource revenue disappears.

The first two forms of the resource curse will be apparent during the boom. But the third becomes obvious only later. Alaska and several other resource exporting states and nations have

clearly escaped the first two forms of the resource curse, but they might still be vulnerable to the third form of resource curse.

There are two common strategies to avoiding this third kind of resource curse: establish a Sovereign Wealth Funds (SWFs) to save part of the temporary resource-revenue in a portfolio of investments for use later; create the right infrastructure so that the economy will thrive on other industries when the resource exports dwindle. There are many potential pitfalls with both strategies.

Most major resource-exporting nations have SWFs that save some of their temporary revenue. But none of these SFWs (including the APF) is large enough to endow the entire government when the temporary revenue source is gone. If the Alaska state government had to rely entirely on the APF, the state would run through all the funds that the APF has accumulated since 1976 in less than four years. Alaska has maintained and grown its SWF, but some governments and draw on their SWFs frivolously so that very little is left when they are most needed.

Infrastructure can be a great solution, but it is vulnerable to both corruption and error. It is very easy to mask graft as infrastructure spending, and even well-meaning governments cannot be sure that the type of infrastructure investments they make will be the best, or even effective, in building an economy capable that will thrive when resource exports are gone.

Any resource-exporting government that puts its people at risk of the third kind of resource curse by spending all or most of temporary resource revenue as it comes in without a solid plan to create a permanent endowment is foolish and shortsighted. This chapter argues that resource-exporting governments can permanently escape the resource curse through a combined strategy of building up their SWFs as much as possible and of looking beyond the SWF toward

renewable and permanent resources that can permanently endow a government without going through the mechanism of an SWF.

## **2. A simple split between dividend and spending**

A resource endowment can be used to finance a dividend or any other form of government spending. Many left-libertarians would use the whole of it for regular government spending, including a more traditional, conditional welfare state, but not put any of it toward a dividend or a basic income. Jay Hammond favored using the whole of Alaska's oil-based endowment to fund the dividend and maintaining the income tax for all or most regular government spending.<sup>3</sup> Michael W. Howard (coeditor of this volume) favors this approach as well, and we discuss it in our final chapter.

This chapter assumes that returns to the endowment (after inflation-proofing and reinvestments) will be divided into two halves: one-half for a dividend, one-half for regular government spending. There are three reasons the discussion here focuses on a half-and-half division. First, it is a simplifying assumption that makes the math very easy.

Second, when one considers a fully employed Alaska model with a large resource base, the potential endowment is so large that the returns can fund both a very large basic income and a substantial amount of other spending. If half of the returns to the resource endowment can support a basic income far larger than enough to eliminate poverty, it is reasonable to use the rest of the returns for other pressing needs, such as schools, infrastructure, the police, the courts, and so on.

Third, at the conference on "Exporting the Alaska Model" in Anchorage in April 2011, many of the participants agreed that there is something in the APF and PFD for everyone—except for the politicians. Voters who prefer small government bureaucracy like the dividend.

Voters who prefer an active government that helps people like the dividend. Rural, suburban, and big city voters all like the dividend. Rich or poor, it's good to have money deposited into your account every October. But politicians don't like the dividend because they can't do anything with it. They like to control the budget. Dividing the endowment half-and-half might get politicians on board with the resource endowment. Getting some of Alaska's oil wealth out of the day-to-day discretion of the government was one of Jay Hammond's central goals in setting up the fund and dividend, and he had good reasons for doing so, but some of what politicians do is necessary. If politicians use their entire budget for graft and waste, it's best not to give them any budget at all, but if we need some of what the regular government budget provides a resource endowment is one good way to finance it.

### **3. A permanent endowment for Alaska**

This chapter looks at the possibilities for an Alaskan resource endowment in two ways. The first examples look at what would have been possible, if Alaska would have made the creation of the largest possible resource endowment its goal from the start. This kind of idea was considered when the oil money started coming into Alaska in the mid-1970s.<sup>4</sup> Of course, we can't change history now, but it is extremely valuable to go through this exercise looking backward with numbers that weren't available looking forward in the 1970s. This exercise reveals the enormous possibilities of a resource windfall like the one that Alaska is experiencing. Later examples look forward from where Alaska is now.

The APF has fluctuated around \$40 billion recently.<sup>5</sup> This endowment has accumulated from deposits totaling \$18.4 billion between the creation of the fund in 1976 and 2010 (new investments continue each year). Thus, even though the fund has paid 30-years of dividends, the principal has increased by a total of 217 percent over its initial investment (adjusted for

inflation). The most recent dividend was \$1,174 in October 2011, and dividends have tended to be between \$1000 and \$2000 per person per year for the last 15 years. According to Erickson and Groh, the state received a total of \$103.5 billion in oil revenue over that period. The remaining \$84.4 billion has gone mostly to the general state budget, although some of it has gone into other funds such as the Constitutional Budget Reserve.<sup>6</sup> In percentage terms, the rules of constitutional amendment that established the APF have earmarked only 11.4 percent of total state oil revenue for the fund between its inception and 2010. Occasional additions made by the legislature have brought the total to 18.2 percent of Alaska's government oil revenue.<sup>7</sup> But most of the other 81.8 percent of Alaska's government oil revenue has been spent as it comes in.

To get an idea about how big the APF could have been, we need to look at what has happened to the oil money generated in the State of Alaska, estimate what could have been done with it, and then consider other possible resource revenue. The following three examples consider three different scenarios about what might have been.

**Example 1:** Assume that instead of eliminating the income tax, the state decided to deposit all oil revenues into the APF.<sup>8</sup> Assume that the state decided to split the returns to the fund evenly between paying the PFD and supporting the regular state budget. Assume that the state adopted the rule of spending 4 percent of the market value of the APF each year, and assume that this on average is about the same percentage that actually has been paid out in dividends on average each year. Assume the fund's \$103.5 billion of hypothetical investments performed as well as its actual investments of \$18.4 billion.

Under these assumptions, the APF would have stood at \$225 billion by 2011. Under the 4 percent of market value rule, it would have \$9 billion available this year, \$4.5 billion for state spending and \$4.5 billion for dividends. If all 700,000 Alaskans applied for the PFD, each would

receive a dividend of more than \$6,400. A family of four would receive more than \$25,700. Instead of receiving the once-year-bonus of \$1,000-\$2,000, Alaskans could count on regular payments of more than \$500 every month. Current total state spending is \$10.5 billion per year. The \$4.5 billion in APF returns devoted to the state budget would cover 43 percent of the state's annual spending; income taxes could be reduced or services increased accordingly.

But example 1 is not the limit of how big the APF and PFD could be. According to Erickson and Groh, oil produced in Alaska has generated more than \$300 billion in total revenue, two-thirds of which has gone to oil companies. Fees, royalties, and taxes on Alaskan oil are low by world standards. Some nations capture as much as 80 percent of oil revenue.<sup>9</sup> Even though the oil was discovered by state geologists on state land, and the oil companies were brought in only as hired help, the state didn't drive a very hard bargain and received much less than the market rate for the oil fields they still own. Let's see what the state could have done by driving a harder bargain.

**Example 2:** Assume the state managed to capture about two-thirds of the total market value of oil produced in Alaska, still less than Norway, Russia, and many of the Middle East nations capture.<sup>10</sup> The rest of the assumptions remain the same as in example 1. If so, the state would have deposited \$200 billion into the APF over the last 33 years. The APF would be worth \$434.8 billion. It would have \$17.4 billion available this year, \$8.7 billion for the general budget and \$8.7 billion for dividends. The share going to the state budget would cover 83 percent of state expenditure. The state would only need to raise only \$1.8 billion in taxes to cover all other current spending. Assuming the population of Alaska remains unchanged at 700,000 (which is admittedly a very big assumption at such a large dividend level, see below), every Alaskan would receive a dividend of more than \$12,000 per year, perhaps in payments of \$1,000 per

month or \$250 per week. For a family of four, that amounts to nearly \$50,000 per year, \$4,160 per month, or \$1,000 per week. Poverty would no longer exist in Alaska, and everyone, rich or poor, would have a large springboard for opportunity.

But this amount is still not as high as the APF could go. The APF in example 2 is based on oil resources alone. If the state applied the same model to all of Alaska's resources, the APF could be higher still. I have no data on the total value of Alaska's other resources. However, using Gary Flomenhoft's estimates for Vermont gives a range of 8.86 to 28.31 percent of GDP for the value of rents on common assets.<sup>11</sup> If we assumed something in the middle, say that natural resources other than oil make up about 15 percent of Alaska's economy \$45 billion per year economy, they would amount to about \$6.8 billion dollars per year or more than \$200 billion over the past 30 years. But let's be more conservative.

**Example 3:** Assume that Alaska could raise half as much from all its other resources put together (including fisheries, water, land, the broadcast spectrum, etc.) as it could have raised from oil over the last 33 years in example 2. The oil number was \$200 billion. So, assume other resources could have raised \$100 billion over the same period. Under this assumption, the state would have deposited more than \$300 billion into the APF between oil and other resources. The total value of the APF would now be about \$650 billion (making it one of the largest Sovereign Wealth Funds in the world). Its returns would produce \$13 billion per year for the state budget and another \$13 billion for dividends, which would be more than \$18,000 per person per year—more than \$1,500 per month, and more than \$380 per week for every man woman and child in Alaska. The state could eliminate all taxes. User fees on state resources would produce revenue enough to finance these dividends and the entire current state budget of \$10.5 billion and it would still have \$2.5 billion leftover for greater spending, saving, or dividends.

As best-case scenario, this example is rosy, but how rosy is it? The assumptions about the returns to the fund's investments are realistic; our hypothetical fund does no better and no worse than the actual fund has. The assumptions about how much money the state could have gotten from the oil industry are also realistic; they are in line with what many oil-producing nations actually do receive. The assumption about revenue from other resources is a reasonably conservative guess in comparison to the hard data available for Vermont. Certainly the revenue available from other resources is much greater than zero in such a large, resource-abundant place as Alaska. Thus, even if the total resource revenue available were less than in example 3, it would still be more than in example 2. Therefore, estimates of the resources available or the likely returns do not make the estimates into rosy scenarios but two other factors do.

First, although the current dividend of \$1000 to \$2000 per person per year probably does not have a large effect on the size of the population of Alaska, a dividend of more than \$10,000 a year would create a large demographic distortion. To maintain a dividend that large, Alaska would have to do one of several things: (1) accept a significant demographic distortion, (2) make some kind of deal with the federal government to control migration from the rest of the country, (3) make a deal with the federal government to deny dividends to new migrants for a significant amount of time, (4) make a deal with the federal government to introduce a similar resource dividend for the rest of the country, which would offset some or most of the migration pressure, or (5) negotiate independence. Of course, the state could instead reduce the size of the dividend, but this strategy is not certain to reduce demographic distortion, because the state is obliged to spend the money on something that benefits Alaskans, and any spending on Alaskans (especially spending that large) will cause demographic distortion.

Second, these examples ignore that the state had a strong need to spend some of the oil money as soon as it came in. When oil money started coming in, Alaska was a poor state with weak infrastructure and poor schools; it no longer is—thanks to the oil boom. Although some of the oil money was wasted, much of it was well spent. As David Rose, the first director of the Alaska Permanent Fund Corporation (APFC), argues, “Until basic needs are met, such as education and public safety, the government has no business saving for the future.”<sup>12</sup> Alaska had to spend a lot to meet its needs at the time. Even if the income tax had remained in place, Alaska could not have saved as much as the higher estimates show without unacceptable cost in delayed capital improvements, delayed educational investment and so on. I cannot say how much this factor affects the potential size of the APF. To determine this, one would have to estimate how much investment was needed, how much of that cost could have been paid for out of income taxes and how much would have had to come out of taxes on oil and other resources.

However, it is safe to say that Alaska could have saved much more of its oil wealth than it has or than it is currently. It could have waited to get rid of the income tax until returns to the APF made the income tax unnecessary; it could have driven a harder bargain with the oil companies; and it could have applied (and it could still apply) the Alaska model to more than just oil and mining.

Had the state done all of this, the APF would now be in the hundreds of billions of dollars—perhaps eight, ten, or twelve times its current size. The state government and the dividend would be nearly invulnerable to the coming decline in the oil revenue because neither would be relying on oil revenues for yearly expenditures. It is this fully employed Alaska model that other states and nations facing the possibility of a resource boom should look to as an example. Any government undergoing a resource boom faces a difficult tradeoff between

building up a permanent endowment and spending now on infrastructure, education, and other pressing needs. But my observation of resource-rich governments tells me that all of them, with the possible exception of Norway, are systematically making the same error: devoting far too much toward current spending and for too little toward the creation of a permanent endowment.

It's not too late for Alaska to put more money away into the APF. The state could start saving all of its oil revenue today. It has recently raised fees and taxes on oil companies, but it might have room to get tougher still. And the state can always apply the model more widely to more resources, many of which can produce permanent rather than temporary revenue streams. If Alaska wants to be ready when the oil runs out, the government needs to take steps in this direction right now. The following example looks at the possibilities for the state starting where it is now.

**Example 4:** Suppose Alaska starts now to save its oil revenue in preparation for the day that exports begin to run low. Current Alaska state revenue is \$10.5 billion dollars, of that 85 percent comes from oil.<sup>13</sup> That's about \$8.9 billion of oil revenue. No one knows for sure when that revenue will begin to decline or at what rate. Let's assume the state will make \$8 billion per year in oil revenue for the next 10 years, and let's look at where the state budget could be in ten years if begins now to save that entire \$8 billion per year of oil revenue, making up for it in the state budget by reintroducing the income tax or some other statewide tax.

Assume that the state puts that \$8 billion per year in a separate, temporary fund under management of the APFC for 10 years—call it the special ten-year account. This money sits and accumulates for 10 years, while the regular APF and PFD continue with all the current rules in effect. In 2022, the state deposits all the money and returns that have accumulated in the special ten-year account into the APF. The state then begins distributing the returns from the enlarged

APF as in the above examples: half for dividends and half for general budget. Assume the money in the special 10-year account grows at 6 percent per year (about what the APF has averaged over the last 30 years). If so, by 2022, the special ten-year account would be in position to deposit more than \$90 billion into the APF. How much money would the APF itself have by then? Assume that between new deposits and returns over and above the amount paid out in dividends, the APF grows by 3 percent per year over the next ten years. The APF uses a fairly conservative inflation-proofing formula, and it has done better than 3 percent per year over its dividends, and so I choose this figure to estimate conservatively. If the APF grows at this rate, by 2022, it would be worth more than \$50 billion *before* the deposit from the special ten-year account. After that deposit, the APF would have a balance of \$140 billion.

A withdrawal of 4 percent of the market value of the APF would provide \$5.6 billion dollars, \$2.8 billion for dividends and \$2.8 billion for government revenue. The portion dedicated to the general budget would replace more than 25 percent of state government revenue, and would therefore finance an enormous income tax cut. The portion dedicated to dividends for \$700,000 Alaskans would produce \$4,000 for each resident (\$16,000 for a family of four). Even if the oil ran dry that year, the state would be in the position to *cut taxes* and *increase* the dividend—the opposite of what the state will probably do if it continues on its current course until oil exports being to run low. There is still time to make the day of reckoning painless for Alaskans, but it will take a sacrifice of higher taxes in the short run to prepare for that day now.

If state oil revenue remained stable for another twenty years, and the state stuck with this plan, the APF could be worth more than \$245 billion in 2032. The returns on the APF would exceed the state's oil revenue, and at more than \$9 billion per year, they would produce more than \$4.5 billion for dividends and more than \$4.5 billion for state revenue. Dividends could be

6,000 per person (\$24,000 for a family of four),<sup>14</sup> and income taxes could again be cut or services increased.

This plan is economically feasible, and I believe, Alaskan voters whose top priority is the fiscal and economic health of their state in 10 or 20 years will look favorably on it. But it is a tough sell politically. It involves a jarring (though temporary) income tax increase in a state where many voters hope to be permanently free of the income tax. The payoff for the income tax now would come 10 years in the future, by which time at least some voters plan to have moved elsewhere. A gradual phase-in of the income tax would make the plan easier to accept for individuals planning their spending over the next few years. But the more gradually the taxes needed to replace oil revenue are phased-in, the less oil revenue can be saved in anticipation of it running low.

Another way to begin saving more for the future is by building on the Alaska model rather than reviving the income tax. Instead of replacing the saved oil revenue with income tax revenue, the state could replace it with taxes on other resources, including mining, fishing, forestry, the broadcast spectrum, financial services, land value, and so on.<sup>15</sup>

This tax strategy should appeal to Alaskans. They have already endorsed the principle of shared resource ownership as they have enthusiastically accepted their dividend checks over the last 30 years. If they endorse the principle that they should receive money for the resources others control, they should be amenable to paying others for the resources they control. Under such a system, the most significant new tax for typical Alaskans will be land value taxation, but one practical reason why the resource-tax strategy could be a good sell politically in Alaska is that, like ownership of oil leases, ownership of most other resources is also highly unequal and

significantly held by people from out of state. Many, if not most, ordinary Alaskans will come out ahead if additional resource taxation is used to boost the dividend.

As I have said in the earlier examples, I do not have the data to produce a reliable estimate about how much revenue could be generated from these sources. If we use my guess that other resources could produce half the revenue of oil, resource taxes could replace half of the oil revenue now going to the state budget. This strategy, therefore, could go a long way toward preparing the state for future reductions in oil revenue, and it could do even better if it were combined with some other form of tax.

Whatever strategy Alaskans employ to prepare for the day when oil revenue begins to decline, the best time to being preparing is now. Oil exports will someday run low, and Alaska needs to be prepared.

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<sup>1</sup> Widerquist, this volume.

<sup>2</sup> Groh and Erickson 2012; Erickson and Groh 2012; Goldsmith 2012.

<sup>3</sup> Hammond 1998.

<sup>4</sup> The discussion here is similarly to idea that was discussed in Alaska at the time under the name, “the Cremo plan.” See Groh, this volume p. XXX.

<sup>5</sup> In July 24, 2011, the APF was \$41,224,000,000, according to the Alaska Permanent Fund Corporation 2011. This figure is in 2011 dollars; all other figures are in constant 2010 dollars.

<sup>6</sup> Erickson And Groh 2012.

<sup>7</sup> Widerquist and Howard 2012b, 118-119.

<sup>8</sup> In Alaska, this sort of proposal is often referred to as the Cremo plan. See Groh and Erickson, Chapter 2 in Widerquist and Howard 2012a.

<sup>9</sup> Warnock 2006.

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<sup>10</sup> Warnock 2006.

<sup>11</sup> See Flomenhoft in this volume.

<sup>12</sup> Rose 2008, 210.

<sup>13</sup> Erickson and Groh 2012.

<sup>14</sup> Again, I am optimistically assuming stable population. Dividends would be smaller if the population rose.

<sup>15</sup> See Flomenhoft's chapter in this volume for resource and common-assets taxes that could be employed.