



CLOSUP Working Paper Series
Number 38

August 2015

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This paper is available online at <http://closup.umich.edu>

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Trusting in the Future: The Re-Emergence of State Trust Funds in the Shale Era

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Paper scheduled for delivery at the 2015 Meeting of the European Consortium for Political Research,
Montreal

Abstract

Energy-producing states confront numerous challenges related to the boom-and-bust of resource extraction, including substantial fluctuation in revenue produced by severance taxes. Revenues surge as drilling expands during booms, creating many pressures for immediate expenditure. This often sets up enormous strain during bust periods when revenues plunge as longer-term needs emerge. This paper, however, examines the small set of states that have devised unique mechanisms to prepare for future busts. It reviews two periods (1970s and 2010s) in which six oil and gas-producing states amended their state constitutions to place severance tax revenues into permanent trust funds for long-term stewardship. It examines the key political factors that prompted the formation of these funds while also considering their resilience to date.

1.1 Introduction

Governments sitting atop massive oil and gas deposits are commonly characterized as “petrostates,” which frequently experience major revenue surges through severance taxes and royalties but face severe challenges in managing those bounties credibly. The very term petrostate has been joined in the public eye with governmental corruption. It is often synonymous with one-party facilitating revenue allocation to secure political control rather than prepare for sustainable economic and energy development once non-renewable resources erode. Analysis in this area has been most heavily focused on emerging economies, including oil-rich nations in the Middle East, Africa, and South America. This work frequently concludes that a resource bounty may actually constitute a “resource curse,” with any benefits from energy development offset by massive and enduring governance and environmental problems (El-Gamal and Jaffe 2010 [1]; Collier 2007 [2]).

But this “curse” is not confined to emerging economies. It can also be applied to developed nations, including sub-federal units such as American states. Indeed, Pennsylvania and Louisiana were very early oil pioneers that faced chronic economic and political challenges during recurrent periods of production surge and decline. Pennsylvania has endured repeated boom-and-bust cycles related to energy development, beginning with oil production in 1861. In turn, Louisiana Governor Huey Long became an archetypical petro-baron in the 1930s, before that term existed. He relied on revenue from steep severance taxes to fund an expansive welfare state for supportive constituents and crush political opponents, while slashing others taxes that later produced fiscal crises during busts (Goldberg, et al. 2009 [3]).

There is no evidence of a new governor Huey Long during the latest surge of American oil and gas production. However, the “shale boom” of the past decade continues to raise questions about state capacity to oversee non-renewable resource extraction, including the issue of how states tax production

and allocate those funds. In particular, this paper examines two periods, the 1970s and 2010s, when energy exploration expanded markedly. During these periods, subsets of energy-producing states amended their constitutions to place some portion of their petro-revenues into formal trust funds, with an eye toward longer-term or even permanent revenue use rather than immediate expenditure. These have some parallel with sovereign wealth funds that have been established around the world in recent decades. This paper asks why these American states took such steps, given inevitable political pressures to allocate revenues in the short-term to maximize political benefits and examines how policy formation compared between these two periods. It further considers whether these permanent funds have proven resilient over time and explores what types of longer-term challenges they have attempted to address, including fiscal and environmental ones.

1.2 The State of State Energy Production

The issue of longer-term governance capacity takes on special meaning in the shale era-- the past decade of significant oil and gas development as a result of improved hydraulic fracturing and horizontal drilling techniques-- with its highly-decentralized drilling style that often extends across substantial swaths of territory. Shale represents a classic example of policy challenges at the intersection of energy development and environmental protection (Lowry 2008 [4]). Considerable debate over state regulatory and taxation policy reflects competing interpretations about whether positive externalities, such as economic stimulus, or negative externalities, such as adverse environmental impacts to air, land, and water, predominate. States like Texas and Pennsylvania have concluded that economic benefits prevail and created regulatory regimes designed to accelerate development. Other states like Colorado and Illinois, by contrast, have established numerous regulatory barriers; still others such as Maryland and New York have imposed moratoria on drilling, concluding that environmental risks are daunting.

Oil and gas extraction is taxed in more than half of the American states, generating more than eight percent of total annual revenues in seven states in 2013. All but one major shale energy producing state (Pennsylvania) has adopted a severance tax, placing a levy on the value or volume of energy at point of extraction. Most of these taxes have been operational for decades but have received new scrutiny in the shale era given production and revenue spikes. The political case for state severance taxes is generally far easier than most energy taxes. It is fairly straightforward to measure the volume of a natural resource being withdrawn from below the surface of the ground and common for the bulk of those resources to ultimately be refined and consumed elsewhere. Consequently, states are drawn toward severance taxes because they produce considerable state revenue while essentially exporting most costs outside the state. This remains exceptional among energy taxes, such as gasoline excise levies, which tend to be highly contentious politically because they send direct and visible price signals within state boundaries. This also parallels some non-energy consumption taxes that “shift taxes to voters in other states” and prove

quite popular at home.¹ Cost-shifting facilitates thus have broad and durable cross-partisan support in dozens of states, including many deemed highly-averse to taxation. Recent oil and gas production surges and price declines have increased political pressure to make severance tax rates more competitive on an interstate basis, given fear over possible investment migration to states offering lower rates. However, no severance tax has been repealed and states such as Ohio examined rate increases in 2015.

One option for mitigating negative drilling effects entails targeted state revenue use. While the majority of severance tax revenues are deposited into general funds, there are growing exceptions to this pattern, including greater focus on environmental problems linked to drilling (Rabe and Hampton 2015 [6]). At the same time, eight states have amended their constitutions to protect designated amounts of their annual severance tax haul for longer-term considerations by placing them in trust funds. This paper asks why, in these cases, it has proven politically feasible to defer political and economic benefits that might accrue from immediate expenditure to instead make resources available to address both known and unknown future needs.

These energy trust funds go far beyond state “rainy-day funds,” which generally function as general-purpose savings accounts, or “designated funds” that link revenues from a particular tax to some related function. Those funds tend to be established through statute and can be rapidly altered through subsequent legislation, including major allocation shifts. Instead, the “trust funds” examined herein entail highly-structured processes for safeguarding the preservation and allocation of capital generated by a severance tax or the comparable mechanism of royalties from drilling on state-owned land. These funds are intended to be permanent, designed to grow their principal through constitutionally-sanctioned investment. They generally allow expenditure only of some portion of interest income or principal in a given budget cycle to assure resilience.² Such trust funds can only be altered through subsequent constitutional amendment rather than statutory change, thereby reflecting a substantial political commitment to delay spending. This distinguishes them from a large and diverse set of designated funds established by many states or the wide range of federal trust funds, including those using earmarked taxes to support Social Security, Medicare, and highway construction (Patashnik 2010 [8]). In these more common cases, only statutes connect a revenue source with a fund. The link can prove quite tenuous, and spending often closely follows tax collection.

The very idea of putting formal constraints on immediate revenue use would seem highly risky politically, given the short-term focus of many political officials and their constituents. Barring some compelling

¹ As Dick Cheney noted in the 1970s, when he served as Wyoming’s lone member of Congress and endorsed high state severance taxes, his state’s experience parallels that of Nevada with gambling taxes, Florida with tourism taxes, and Delaware with corporate franchise taxation (Powers 1982, 7 [5]).

² Jonathan Anderson has noted, “a trust fund is essentially a contract governing future use of specified resources” that establishes a “tool of resource control allowing the trustor (or owner) to transfer resources, but retain future control over how those resources are used. Governments use the trust fund concept similarly, to control future uses of resources” (Anderson 2002, 64-66 [7]).

case to defer benefits that can be derived from severance tax revenues, elected officials likely possess enormous incentives to spend funds immediately. This may explain why trust funds exist in only a small set of severance tax states and why their adoption has been concentrated into two brief intervals during the extended American engagement with oil and gas production. The following section will introduce these cases, placing particular emphasis on Alaska in the 1970s and North Dakota in the 2010s, examining key factors behind adoption and resilience and performance to date.

1.3 The First Wave: 1974-1986

The idea of creating a trust fund for oil and gas royalties emerged in Texas during its mid-19th Century oil boom, with a pair of separate funds designed to support education. An 1854 statute created the Permanent School Fund for elementary and secondary education but this program and a subsequent Permanent University Fund for higher education were woven into the Texas Constitution in 1876.³ The Texas funds provide approximately two to three percent of annual elementary and secondary education costs and 10 to 15 percent of annual University of Texas system costs, reflecting its standing as the largest state energy trust fund in total holdings except Alaska (Table One). These funds have remained highly-resilient since their founding, aside from distribution methodology changes addressed in 2005 and 2011 constitutional amendments. They do not receive severance tax revenues, which are deposited primarily into the state general fund.

Texas remained a trust fund outlier for nearly a century, until four additional Western states--New Mexico, Wyoming, Montana, and Alaska--followed its lead in the mid-1970s. This was a period of considerable energy price escalation, linked to oil supply crises that prompted states to maximize potential tax revenue yields. Existing severance tax rates were increased in numerous states, and some began to consider longer-term revenue use questions. New Mexico, Wyoming, and Montana all amended their constitutions between 1974 and 1976, designating portions of their severance tax monies into trust funds. Constitutional amendment formulas vary by state but generally require super-majority votes in both legislative chambers followed by a statewide ballot proposition (Table One). Both New Mexico and Montana opted to split annual allocations from their trusts equally between the state general fund and public education; Wyoming opted to place most revenues into its general fund, while allowing a series of low-interest loans to local governments. Alaska took similar steps during this period, though it faced a unique hurdle since its 1959 constitution prohibited dedicated funds. Its 1976 amendment process, passed on a 73,588-to-38,518 vote following overwhelming legislative approval, eliminated that restriction. The amendment designated that “at least twenty-five percent of all mineral lease rentals, royalties, royalty sale proceeds, federal mineral revenue sharing payments and bonuses received by the State shall be placed in a permanent fund.” This high percentage allocation alongside large oil production volume has produced

³ Funding was secured initially through royalties from drilling on state-held lands; it later added royalties that became available when the federal government gave Texas jurisdiction over “submerged lands”--lands below the high-tide line--with major oil deposits (Schlosser 2013 [9]; Kuncie and Morgan 2005 [10]).

total trust fund market value that exceeds the total of all other state funds combined (Table One). The constitutional amendment did not specify how the fund would be managed or earnings allocated, leading to subsequent statutes establishing annual dividend payments to eligible residents as primary revenue use, with inaugural dividends issued in 1982 that continue annually.

1.3.1 Drivers Behind First Wave Adoption

States with severance taxes experienced revenue surges in the 1970s but only a handful altered their established expenditure plans. This raises the question of why some would take the common step to amend their constitutions and protect at least some portion of that bounty from immediate expenditure via a trust fund. Our review of case study political histories revealed that three factors emerged in each of these instances, leading states to eschew short-term expenditure in favor of long-term investment through trust funds: resource curse aversion, fiscal conservatism, and public resource ownership.

Resource curse aversion. Trust fund states sought to reduce risks that they could become dependent upon revenue from a non-renewable commodity, cognizant of precedents where production “busts” often followed “boom” periods. State officials had likely not immersed themselves in the academic literature on the resource curse phenomenon but frequently had some prior experience with the collapse of a commodity-based sector and its consequences. They turned to trust funds to mitigate impacts of any bust and prepare for the longer-term. Long before statehood, for example, Alaska had experienced repeated boom-and-bust cycles linked to development of various natural resources, including non-renewable ones such as firs, fish, and timber. Those swings as well as those for such non-renewable resources as copper and gold in many respects prepared Alaska for possible oil era risks. The idea of a trust fund received serious consideration in Alaska as early as 1970, within two years of historic oil discoveries near Prudhoe Bay and explosive production growth. Republican Governor Jay Hammond (1974-1982) had earlier been drawn to this concept, given his concern about fisheries depletion in the borough he represented as mayor. He feared that an oil-dependent Alaska could face severe economic swings once price or resource decline occurred (Moss 2012 [11]). Other early trust fund adopter states faced somewhat similar experiences, all with long-standing traditions of mineral extraction and state governments heavily dependent on severance taxes from these minerals. Montana legislators debated at considerable length the possible longer-term risks to the state from expanded energy development in the 1970s, as they moved toward their plan for tax increases and trust fund development (Powers 1982 [5]); similar concerns also emerged in New Mexico and Wyoming (Williams 2008 [12]; Willms and Alexander 2014 [13])

Fiscal conservatism. States also worried openly about their capacity to prudently handle major revenue surges that might arrive with little advanced notice. Hence they viewed the trust fund as a stabilizer that might minimize major fiscal errors and avoid reckless, short-term expenditure of government revenues likely not sustainable over extended periods. Alaska had experienced such a shock

to its political system within two years of the Prudhoe Bay discovery. Its initial \$900 million yield from state oil leases in 1969 generated numerous proposals to spend the entire amount rapidly. New programs were quickly established to support student college loans, expand school construction, and create a “longevity bonus” with monthly cash payments for Alaskans over age 65 who had resided in the state since statehood. These programs were initially popular but realization that most of the new funds had disappeared by mid-decade left Alaskans “aghast that they had frittered away so much in so short a time,” according to Jonathan Anderson. “Fears of uncontrolled legislative spending had been confirmed, and Alaskans sought ways to protect their natural resource revenues for future generations” (Anderson 2002, 58-59 [7]). Hammond lamented that Alaska’s oil-generated “nest egg” had been “scrambled” and argued that a trust fund was essential to block future temptations to spend massive amounts rashly (Groh and Erickson 2012, 18 [14]). He argued that by combining the Alaska trust fund with an annual dividend allocation plan, “Nothing could do more to curb excessive growth of government (as it) ties the string from the public pocket book to the bureaucratic balloon. Every time we float it up and twitch the string through increased taxes or reduced dividends the people are going to react.” (Anderson, 61 [7]). Other states that adopted a trust fund were also driven by fiscal caution. Wyoming had brushes with virtually empty coffers during periods of resource depletion in the 1930s and 1960s and mounted economic development programs during boom periods that were derided as wasteful. Much like Hammond, Republican Governor Stanley Hathaway championed the idea of linking severance taxation and trust funds. His support for a 1975 severance tax rate increase was made conditional on a ballot proposition to amend the constitution to create a trust fund and deter reckless spending (Schlosser 1982, 11 [9]).

Public resource ownership. States establishing energy trust funds regularly characterized these resources as a vital part of their citizenry’s natural inheritance. Regardless of whether drilling occurred on private land (producing severance tax revenue) or public land (generating royalties), states contended that some portion of their inheritance was being permanently withdrawn, necessitating monetary compensation. This often fused with related concerns about adverse environmental impacts from energy development and need for longer-term protection. In Alaska, this sentiment was linked directly to a widely-cited clause from the state constitution, calling upon the legislature to “provide for the utilization, development, and conservation of all natural resources belonging to the state, including land and waters, for the maximum benefit of the public.” Such views also surfaced prior to statehood, during territorial governance and the Alaska constitutional convention; they endure in more recent decades, reflected in the frequent public reference to oil resources as belonging to the Alaska “owner state” (Groh and Erickson 2012, 19 [14]). During a 2014 ballot campaign over state severance taxes, these issues surfaced regularly in exploring the question of whether high rates established under former Governor Sarah Palin should be restored after the state had cut taxes to encourage more drilling. One state senator noted: “It’s our oil—we’ve all heard that. But what does that mean? Governor Wally Hickel⁴ talked often about Alaska being an owner state. We all own the oil and minerals in the ground.” Other trust fund states demonstrated similar views and linked trust fund creation with efforts to itemize and assess the social costs of development and related costs that states will incur following a “one-time harvest” of non-renewable energy (Powers 1982, 17-20 [5]).

⁴ Hickel served as a Republican in the 1960s and an Independent in the 1990s, while also serving as U.S. Interior Secretary in the 1970s.

1.3.2 Resilience of First Wave Trust Funds

Trust fund adoption represents an unusual step toward deferring immediate benefits from oil and gas development but its long-term resilience is not guaranteed. Even with constitutional protection, trust funds can become fodder for political battles over management and revenue use. Beyond the United States, they have demonstrated highly-uneven performance, producing investment and allocation strategies more responsive to short-term political needs than longer-term concerns. As Michael Ross has noted, such “funds have a dismal track record: governments so frequently violate their own rules about moving money in and out of these funds that their benefits seem to be negligible” (Ross 2012, 242 [15]). His analysis applies primarily to funds established in emerging nations but some in advanced Western democracies have suffered similar fates. The Alberta Heritage Savings Trust Fund, adopted in 1976, has been widely criticized as favoring short-term projects linked to current political leaders. Alberta’s “careless and directionless spending” has left the fund with only a modest balance, despite the province’s substantial oil and gas production; it continues to lack a viable longer-term plan despite nearly 40 years of operation (Commonwealth North 2007 [16]; Williams 2008, 739 [12]). State trust funds, however, have generally proven resilient, with relatively few structural modifications since their initial adoption and no scholarly literature alleging malfeasance. They have generally adhered to original plans for revenue use and deterred potential threats imposed within-state, cross-state, or federally.

Constituency Building. One fundamental challenge in sustaining support for a major program that eschews immediate revenue use is building a political constituency that supports the strategy and can deflect temptations to tap into reserves for short-term projects. The Alaska dividend system, however, has successfully protected and expanded its enormous base of reserves while creating a uniquely-visible and -popular allocation system through annual dividend payments to residents. Dividend allocations have ranged from a high of \$2,069 in 2008 to a low of \$331 in 1984, averaging \$1,200 during the past decade. They are allocated annually via lump sum payment right before December holidays, making them hard to miss, especially since state residents have long since become accustomed to receiving dividends, and heavily-advertised sales promotions alongside their arrival. Speculation over annual dividend size, which fluctuates based on incoming revenues and recent investment performance, remains an ongoing Alaska media focus.

This approach squares with the intent of original trust fund architects to create a strong base of political supporters. As fund champion Hammond explained, “I wanted to encourage contributions into the investment account and to protect it against its invasion by politicians by creating a militant ring of dividend recipients who would resist any such usage if it affected their dividends” (Moss 2012, 19 [11]). Numerous scholarly accounts of the Alaska fund concur that it has established a broad and devoted base of political supporters, who are quite familiar with the workings of the trust, eagerly await their annual

dividend, and believe that the allocation should only increase in the future. Some analysts contend that the Alaska Permanent Fund is a state-level counterpart to the federal Social Security program, given its salience among beneficiaries and resilience over generations (Howard and Widerquist 2012, 225 [17]).

Periodic proposals to modify the Permanent Fund have emerged throughout its operational life, including allocations for education, infrastructure, and general fund support. These proposals have proven most common when oil price collapses trigger steep declines in Alaska oil revenues given the state budget's heavy dependence on severance tax funds. But none of these has ever gained serious traction; a 1999 advisory ballot proposition to allow some revenue reallocation to public services received 83 percent opposition. As the Permanent Fund emerged as a "third rail of Alaska politics," officials discussing possible reforms have faced repercussions. Candidates for elected office routinely swear fealty to the fund and dividend, "fearful that being soft on the dividend will end their political careers" (Erickson and Groh 2012, 101 [18]). "It would be political suicide to touch it," noted one prominent state official in 2015.

None of the other states have been as effective in building a constituency base; they maintain trust funds that remain considerably smaller than Alaska's and principally supplement general governmental functions such as education. There have been relatively few modifications of these programs or formal challenges to them, with most approved changes rather technical in nature. In 1996, for example, voters approved a Wyoming constitutional amendment to allow for investment of Permanent Mineral Trust Fund revenues into corporate stocks. Nine years later, New Mexico voters approved a constitutional amendment to increase slightly the annual distribution drawn from the Severance Tax Permanent Fund. And while educational funding support may not have the allure of a dividend program, it does retain constituency support, particularly among teachers in states such as Texas. In turn, Wyoming has targeted some of its funds into its Hathaway Scholarship program, which has begun to create a large constituency of potential scholarship recipients and their families.

Resisting Federal Encroachment. States appeared well within their constitutional boundaries in establishing severance taxes and allocating some revenues into trust funds. But numerous non-production states have questioned the federal constitutionality and fiscal fairness of imposing significant tax burdens that might ultimately be transferred out-of-state to their residents for payment via energy consumption. Opponents have invoked the possibility of federal preemption, either through litigation or statute, to attempt to restrict or reduce such tax policies from energy production states. This challenge followed a classic pattern of potential federal encroachment upon state powers, promoted by energy importing states that deemed themselves burdened by energy exporting counterparts (Bednar 2009 [19]).

A legal challenge to the tax-and-trust nexus took primary shape in a challenge to Montana's severance tax, which alleged federal Commerce Clause violation when that state quadrupled its coal severance tax rate in 1975 to 40 cents per ton. This produced an immediate and dramatic increase in

Montana severance tax revenue, sufficient to legitimize a trust fund set aside of 50 percent of total yield. The U.S. Supreme Court dismissed the challenge in a 1981 decision, *Commonwealth Edison v. Montana*, accepting Montana's claims to levy the higher tax. Building on three earlier cases from the 1920s, known as the "Hesler trilogy," this essentially ended subsequent court challenges in this area (Powers 1982 [5]).

The legislative branch, however, has also proved contentious, particularly in the late 1970s and early 1980s when major tax increases were being adopted and trust funds established in several states. A number of Congressional hearings and forums on intergovernmental relations brought this issue to a boil. Legislators representing energy-importing states derided the efforts of energy-production states to increase revenue yield. Minnesota Representative James Oberstar, for example, warned of "the eventual creation of six or seven Western Superstates which will have all the resources" (Sagan 1983 [20]). Other officials from energy-importing states proposed in Congressional hearings the creation of severance taxes for their prized exports, ranging from crops such as corn and soybeans to Ivy League educations. Such sentiments triggered a flurry of bills introduced during this period that would have either imposed federal preemption on state severance taxes, in some cases sharing revenue with them, or established a federal cap on state rates. These triggered vehement responses from representatives of trust fund states, who emphasized the large and perhaps unknowable costs of negative externalities linked to energy extraction as a rationale for their actions. "No one really knows the true cost of development," noted Montana Governor Ted Schwinden in 1981. "No one can calculate the impact of soil loss, of erosion, of loss of habitat for wildlife." Wyoming Senator Malcolm Wallop similarly asked: "Who makes the judgment that it exceeds legitimate social costs? Have you been to Wyoming and seen those social costs?" (Hellerstein 1984 [21]). Congress never directly answered this question and Congressional challenges to this area of state taxation have largely ebbed, giving severance taxes and trust funds considerable intergovernmental resilience.

1.4 The Second Wave: 2010-2015

Further diffusion of the energy trust fund idea virtually halted until the shale era.⁵ Fracking-generated production triggered significant severance tax revenue surges in dozens of states. Among this group, North Dakota and Utah amended their constitutions, adopting new trust funds during this "second wave." Both featured mineral-based economies with severance taxes established in previous generations. A third state, West Virginia, created a trust fund in 2014 through legislation while weighing future constitutional reforms. Both North Dakota and Utah took iterative steps toward formalizing their funds, learning from

⁵ Alabama and Louisiana created trust funds in the mid-1980s, but focused exclusively on off-shore royalties. The earnings of the Alabama Trust Fund are used to assist state budget expenditures and five other trust funds, including the state general fund, while Louisiana's fund is used to provide revenue to the Louisiana Board of Elementary and Secondary Education, as well as regents and fellowships in higher public education.

design failures of initial versions adopted in 1997 by statute in North Dakota and 2008 constitutional amendment in Utah. These set the stage for North Dakota's 2010 Legacy Fund and Utah's 2012 Permanent State Trust Fund. In North Dakota, initial reliance on legislation left its fund vulnerable to repeated raids for short-term needs. In Utah, initial reliance on an amendment allowing voluntary contributions to the fund generated modest and intermittent payments, prodding the state to establish a more reliable funding mechanism.

However, these two states differed in many respects, making North Dakota the most consequential second wave case to date, with some parallels to Alaska in the earlier period. It experienced a major surge of oil development in the mid-2000s via fracking. With a pair of overlapping severance taxes (an Oil and Gas Production Tax approved in 1953 and an Oil Extraction Tax created in 1981) set at a combined rate of 11.5 percent of extracted value, increased production created dramatic spikes in state government revenue. This surge triggered far-reaching changes in North Dakota society, with major population increases for the first time in nearly a century and explosive growth in many Western communities that were previously deemed fading into oblivion. Consequently, its Legacy Fund emerged during a series of transformational changes in the state.

In contrast, Utah has some history in oil and gas production, but has experienced little recent expansion; it remains unclear if it will ever be a major shale developer. Utah's oil and gas severance taxes have produced less than five percent of the revenue generated annually in North Dakota in recent years, reflecting lower tax rates but also markedly less energy extraction. Utah's trust fund creation can thus be understood as anticipatory, trying to prepare for the possibility of future expansion. West Virginia parallels the Utah case to some degree. Democratic Senator Jeff Kessler initially proposed a constitutional amendment to establish a trust fund that would receive 25 percent of annual severance tax revenues. This faced considerable opposition from Republican Governor Earl Ray Tomblin and legislative leaders, and the fund was ultimately downsized into a statute with a three percent set aside along with stiff constraints on any allocation in years where specified fiscal conditions were not met. However, Kessler and legislative allies continue to champion an expanded version for placement into the constitution.

North Dakota allocates 30 percent of all severance tax revenue to its Legacy Fund, including \$1.71 billion in the 2013-2015 biennium. Utah does not allocate revenues to its fund until after it clears \$50 million in a given year and then establishes a sliding scale that begins at 25 percent for amounts above \$50 million and escalates to 75 percent for amounts above \$100 million. However, low production has limited any revenue growth thus far. West Virginia's fund also has received only modest revenue to date. Thus, only the North Dakota fund has proven consequential in the second wave thus far and is our primary focus in this section. We conclude that all three factors contributing to first wave trust fund adoption resurfaced during the second wave. In addition, second wave states formally borrowed from ideas and experiences of their 1970s-era predecessors.

1.4.1 Drivers Behind Second-Wave Adoption

Resource curse aversion. North Dakota is particularly sensitive to boom-and-bust cycles, as these experiences are woven deeply into its political and economic fabric. Resource curse patterns in both agricultural and energy production have routinely recurred since statehood in the late 19th century. Historian Elwyn Robinson describes this as the “too-much mistake,” whereby North Dakota repeatedly experiences commodity-based surges but then overreaches with expansive development efforts that ultimately prove “far beyond the ability of the state to maintain” once inevitable declines occurs (Robinson 1994 [22]). Huge swings in wheat production were constant North Dakota challenges until the 1951 Bakken region oil discovery, which “set off an exciting boom” that disappeared but then recurred in subsequent decades. Some of the very communities that experienced explosive growth in the shale era began this pattern in the 1950s, with steep population expansion and related pressures to expand markedly education, social services, and infrastructure. But North Dakota faced swings not only in price and demand but also the challenge of producing large amounts of oil without proximity to refineries or cost-effective transportation options, leading to production quotas per well and significant production slumps by the end of the 1950s. This pattern would occur in subsequent decades, most notably the 1970s and 1980s when North Dakota geared up once again not only for oil production and also expanded coal mining given its substantial supplies of lignite and growing national demand for coal. As historian David Danbom noted, the state’s substantial and diverse “reserves of fossil fuels meant that North Dakota enjoyed a boom during the energy crisis of the 70s, when lignite production nearly tripled and oil production nearly doubled, but coal and petroleum are commodities subject to a boom-and-bust cycle, as the state learned to its deep regret in the 80s” (Danbom, 1994, 586 [23]).

North Dakota political discussions during the shale era remain haunted by memories of these prior resource collapses and fears that history could repeat yet again. During debates leading to the 2010 trust fund constitutional amendment, legislators repeatedly invoked the downswing of the 1980s and earlier ones in public statements and op-eds. Republican Senate Majority Leader Robert Stenehjem noted, “This isn’t going to last forever. Look what happened in the ‘80s.” His Republican Senate colleague, Dwight Cook, reminded that during the early 1980s, “people didn’t think it’d go (away) so fast either. It could happen.” Such sentiments clearly contributed to the broad consensus among legislators and elected executive officials to identify some fiscal tools to hedge short-term spending pressures against longer-term considerations. By 2015, officials from both legislative chambers and both political parties took considerable comfort in their decision to create a Legacy Fund and related steps to mitigate pressures stemming from the decline in oil production amid national and global price collapses. “We know this isn’t gonna last forever and we have some experience with this,” explained a Democratic senator. “We know Bakken is a world-class resource but we all sense good times can go away.”

Prior boom-and-bust episodes with uranium in Utah and coal in West Virginia have been repeatedly invoked by trust fund proponent in those states. As Senator Kessler has noted, “Coal has been king in West Virginia for 100 years, but it hasn’t taken very good care of its subjects.” Indeed, West Virginia has long suffered some of the most severe poverty of any American state, especially during downward energy production swings, and also faced massive environmental contamination from previous extraction. State trust fund proponents routinely lament the missed opportunities from prior energy surges to build a fiscal foundation in making the case to not repeat history in the coming decades.

Fiscal conservatism. North Dakota’s boom-and-bust legacy coincides with a strong aversion to reckless governmental spending that appears baked into the state’s political genetic code. The state has generally tipped Republican, reflected in one-party control of both legislative chambers and all elected executive offices in recent years, although the state does have considerable experience with cross-partisan partisan control. One uniting factor between the parties is an abiding concern about spending surges during times of fiscal abundance that are seen as rash or imprudent. Budgeting is conducted on a two-year biennium cycle, often creating intensive pressures for new spending right after an election and further fueling fiscal caution. As Democratic Senator Connie Triplett noted in 2015, “We are all conservative Republicans here when it comes to money. We are a pretty poor state and we tend not to have lots of ideas floating around about new ways to spend money when we do get it.” Legislators regularly link this pattern directly with prior boom-and-bust cycles, with an aversion to making fiscal commitments that cannot be sustained.

This ethos made the Legacy Fund idea attractive and also encouraged other fiscal steps taken by North Dakota in recent decades. North Dakota officials have long been reluctant to follow the path of many other states and pump significant amounts of severance tax revenue into general funds. This reflects fear that such allocation would be highly-risky given likely revenue swings from such a tax source as well as the possibility that revenue spikes might prompt wasteful spending. One technique that North Dakota has commonly used and helped set the stage for the Legacy Fund is heavy reliance on designated funds created by statute. Aside from the 30 percent of North Dakota’s severance taxes designated for the Legacy Fund, the bulk of remaining revenues go to a series of these funds rather than the general budget. These include a number of funds that cover environmental oversight costs and possible remediation expenditures, including the Resources Trust Fund, the Oil and Gas Impact Fund, the North Dakota Heritage Fund, the State Disaster Relief Fund, and additional funds supporting energy research and development of renewable energy. Other funds are focused on strategic investment, foundation aid stabilization, and property tax relief, with severance taxes contributed less than five percent of total general revenues. State officials invariably refer to this model as the “bucket” strategy, designed both for budget stability and to assure funding for areas impacted by drilling. Officials acknowledge that these buckets can be proved “leaky,” with funds shifted about under various situations, but they contend that it provide overall stability and predictability while deterring waste.

The idea for some kind of a permanent trust fund surfaced in the early 1980s, strongly encouraged by the elected State Tax Commissioner. This initially lacked broad support but the subsequent resource revenue bust led to the 1997 creation of a statutory Permanent Oil Trust Fund, funded by legislative appropriations when severance tax revenues exceeded specified levels. However, it rapidly became known as “General Fund Number Two,” lacking restrictions on legislative reallocation and thereby undermining the original purpose of fiscal stabilization and conservatism. It was repealed after the 2010 ballot proposition that created the Legacy Fund passed with 63.57 percent support. This step followed the 2008 defeat of a ballot proposition with similar goals but concern about a complex and confusing rate structure that seemed likely to challenge fiscal stability and bucket system viability. Utah legislators are also known for very high levels of fiscal conservatism, including substantial rainy-day fund reserves. They also had concerns about initial proposals that might have placed so much revenue into a trust fund that it would undermine near-term balance and needs before reaching a formula that gained support.

Public resource ownership. North Dakota’s enduring fiscal conservatism is also interwoven with a form of populism that promotes unique forms of direct state government engagement in the economy, with some related to resource development. Commonly characterized as “prairie populism,” this has taken numerous forms over the past century and, in some respects, set the stage for the creation of the Legacy Fund. North Dakota remains the only state to operate its own public bank, which has substantial involvement in the agriculture and energy sectors. It has also established other “socialistic enterprises” such as a State Mill and Elevator for wheat to attempt to ease farmer costs in storing grain and preparing it for market (Robinson 1994, 380-82 [22]).

Alongside willingness to such public institutions, North Dakota also demonstrated a populist streak through a pair of historic steps to approve significant severance taxation rate increases in earlier decades, indicating that any fiscal conservatism in use of public revenues does not necessarily translate into caution in imposing costs on resource-producing industries. In the 1970s, North Dakota lacked a coal severance tax and reclamation program at the very point coal extraction was expanding dramatically. In 1975, the legislature approved a five cent per ton coal tax with industry support when North Dakota appeared poised to become a major coal producer. But Democratic Governor Arthur Link tapped populist sentiment in vetoing the bill and rallied broad support for an alternative tax proposal set at 33 1/3rd percent, which would easily have been the highest of any state. Link characterized coal and fossil fuels more generally, as a “one-time harvest” of resources that belonged to the public (Link 1978 [24]). He ultimately settled for a compromise tax rate ten times higher than the one approved by the legislature, while also slowing coal development through adoption of a far-reaching land reclamation program. North Dakota also opted for taxation policy that was actively opposed by oil and gas interests a decade later, after a major recession led to huge education cuts. Populists proposed supplementing the existing five percent oil and gas production tax on gross value with a ballot proposition to amend the constitution with a 6.5 percent oil extraction tax. Revenue was designated for the Common Schools Trust Fund and the general fund. State Tax Commissioner Kent Conrad, a Democrat who later served in the U.S. Senate, pursued a unique blend of fiscal conservatism and populism on numerous issues. He championed the ballot proposition that passed with 56.7 percent in 1980.

Borrowing from established cases. North Dakota’s development of a trust fund drew upon its own prior experience but also was influenced by precedents set by other governments. Whereas initial state discussion on the topic in the 1970s could not identify competing models that might warrant emulation or aversion, things were fundamentally different four decades later. Numerous North Dakota officials actively engaged in a process of cross-jurisdictional learning in considering the opportunities and challenges posed by trust fund development. “We knew that other states were doing this,” noted one senior executive branch official in 2015. “We decided we needed to do this.”

North Dakota officials gave serious scrutiny to first wave trust funds, particularly Alaska and Wyoming. They were clearly impressed by the formal structuring of these two trusts, particularly their formal mechanisms for routing revenues into a constitutionally protected fund with rigorous investment strategies and oversight. But they had significant misgivings about trying to determine in advance how revenues might be used and generally abhorred the Alaska dividend model for allocation, dismissing it as fostering entitlement and failing to prepare the state for longer term needs. “Alaska comes up a lot and we talked with them,” said one senior state budget official. “They said, ‘don’t do what we did.’” There is far-reaching consensus among elected leaders from both parties in North Dakota that any allocation plan should be developed deliberatively over coming years, avoiding any lurch toward immediate decisions that could constrain consideration of longer-term needs. There was also consensus that Article X of the North Dakota constitution, which prohibits state “donations to or in aid of any individual,” likely precludes any type of dividend, but made no effort to override that through the 2010 constitutional amendment process. So North Dakota officials appear generally open to any number of revenue use options, with the exception of Alaska-style dividends. “We looked closely at Alaska and, in our view, how well it did not work,” said one senior Republican senator in 2015.

Instead, North Dakota takes its primary cue not from an American state but an international case with unusual local significance: Norway and its heralded Global Pension Fund Global (GPF). Norway established the GLPG in 1990, after a series of initial efforts to set aside revenues from its expanding oil and gas development, much of which involves conventional drilling techniques off its coast. Its tax and royalty regime has produced the largest sovereign-wealth fund in the world, one that is not only vast in scope (with some \$850 billion in assets in 2014) but also widely recognized as a model for excellence in terms of fiscal stewardship, transparency, and deliberative planning for long-term use. This fund will ultimately focus its resources on cross-generational equity through support of pensions and related programs for senior citizens (Alsweilem, et al. 2015 [25]).

The Norwegian case was cited repeatedly in discussions leading up to North Dakota’s successful ballot proposition creating the Legacy Fund and continues to emerge frequently in subsequent deliberations. Delegations of North Dakota legislators have visited Norway for GPF briefings and

hosted leading Norwegian officials in Bismarck for added consultation.⁶ This alliance reflects a deep respect for the GPFG but also the ancestral ties of a state with the largest Norwegian-American population of any other, greater than 20 percent. “We like to think we’re Norway and we have this relationship with them,” explained one senior state official in 2015. “Even StatOil (Norway’s publicly-held energy development firm) has a presence here in the state, having bought (a Bismarck-based oil and gas firm) out, so we have all sorts of connections.”

North Dakota officials, regardless of partisan affiliation or position, speak in near-reverential terms about Norway and its sovereign-wealth fund. Consequently, the “Norwegian experience” influenced not only initial thinking about trust fund design but made its adoption particularly compelling in North Dakota. Consistent with the general theme of the literature on cross-state policy diffusion, early-adopting states such as Alaska and Wyoming did contribute to North Dakota’s decision to pursue a trust fund. But the international experience from Norway has had significantly greater consequence in the state, while North Dakota has proven inspirational in West Virginia. In fact, the state had never attempted to formally designate any of its severance tax revenues for longer-term consideration until Senator Kessler emerged in the late 2000s as an advocate for a West Virginia fund modeled on earlier ones. Kessler traveled to study the issue, meeting with officials from North Dakota, as well as Wyoming and Norway, while also leading a delegation of West Virginia legislators to Bismarck in 2013. Utah, in contrast, appears to have modeled its trust fund more exclusively after two neighboring states, Wyoming and Montana.

1.4.2 Resilience of Second-Wave Trust Funds

It is premature to offer any detailed performance assessment of second-wave trust funds and their ability to prove resilient over coming decades. The 30 percent transfer of revenues from both North Dakota severance taxes began on schedule in 2011; the Legacy Fund reached a balance of \$2.8 billion by the end of 2014 and was on track to reach \$5.8 billion by 2017 when initial allocations can be made. At that point, the legislature can allocate up to 15 percent of the fund principal over the two-year biennium cycle if it secures two-thirds approval from both chambers, suggesting a political need for broad and cross-partisan support. The state began to experience significant declines in severance tax revenues during 2014-15 but its minimal general fund dependence on these funds has buffered it against the fiscal shocks evident in many other energy-centered budget systems. In Alaska, by contrast, the royalties-driven dividend remains stable but the state has lurched into fiscal crisis; historically depended on severance tax revenues for more than 75 percent of its total budget, Alaska began in 2014 to revisit a pattern of severe deficits. North Dakota is far more stable, continuing to invest and expand its Legacy Fund, sustain its numerous buckets, and tap reserves for “surge spending” related to infrastructure needs.

⁶ In fact, one former state official received a fellowship to pursue extended study of the Norwegian oil system and gives public presentations on his findings around the state.

North Dakota's greater trust fund challenge, of course, will be longer-term stewardship and the question of allocating revenues. As Democratic Senator Mac Schneider has noted, North Dakota now begins to turn to the question of "how we take this one-time harvest of natural resources revenue and make it a permanent investment in our people." Legislators began to field growing sets of proposals and suggestions during the 2015 biennium and acknowledge that competing constituencies may emerge that will prove difficult to reconcile, especially given super-majority requirements for allocation. North Dakota closed its 2015 biennium, however, having summarily rejected any proposals for various trust fund spending options, tabling these until 2017. Aside from the widespread aversion to Alaska's dividend model, numerous options are clearly on the table for future review, including higher education, health care and mental health, environmental protection and long-term reclamation after oil development, infrastructure, cultural and heritage programs, intergovernmental revenue sharing with localities, and long-term budgetary stabilization. There appears some sentiment for considering a separate point of investment emphasis during each future biennium, rather than supporting exclusively one area over time; some efforts have begun to gather diverse stakeholders for extended study and long-term planning (Great Plains Institute 2014 [26]). One legislative proposal to create a foundation to oversee this process was rejected, as legislators clearly view this decision as within their purview. "We need to put these ideas into the public policy arena, which is the Legislature," said Republican Senator Dwight Cook. "It's a serious discussion. We need to come up with a plan. . . that benefits the people of North Dakota."

1.5 The Future of Trusting in the Future of American States

There has only been modest experimentation with constitutionally-backed trust funds that safeguard government revenue from energy extraction for longer-term use. This has been confined thus far to the state level and a small set of cases representing a distinct minority of energy-producing states. This underscores the political challenge of shifting significant revenues away from immediate use in favor of longer-term needs that might emerge after production declines. However, those trust funds that were established in prior periods have proven resilient. In turn, there have been no serious efforts in North Dakota or Utah to peel back their constitutional protections during their first half-decade of operation.

While these trust funds feature somewhat similar design, they vary markedly in revenue allocation. Current allocations range from the highly-popular dividends in Alaska to general funds or education in other states. Although trust fund revenues could theoretically be linked to long-term environmental stewardship, states have generally avoided this option to date. They have not used this path to address negative externalities linked to energy extraction or develop alternative energy sources as non-renewable ones are depleted. North Dakota goes farther than other trust fund states through designated fund "buckets" from severance taxes that are tied to specific environmental concerns, but these funds lack constitutional protection. Instead, other states tend to continue to rely largely on general revenues, earmarked fees, and bonding provisions to cover most environmental protection expenses.

Few additional states have begun to explore the trust fund option in recent years, even before the recent plunge in price and severance tax revenues. Consequently, trust funds remain somewhat peripheral as a policy option in most American energy-producing states. They are more common West of the Mississippi River, although there is no consistent partisan pattern of political control among states that have adopted this approach. The attraction of immediate revenue expenditure from a relatively popular energy tax source to cover the general governmental costs routinely eclipses an option that would set aside some of these revenues, invest them and prepare to allocate them for longer-term needs. Near-term prospects for further development of state trust funds may be further mitigated by recent declines in oil and gas prices, as trust funds have generally been established when states experience revenue surges and attempt to safeguard some revenue for the future needs. However, those trust funds established to date have proven resilient and generally capable of avoiding many of the problems commonly associated internationally with sovereign-wealth funds, including corruption. Relatively recent expansion of the trust fund concept, most notably in the case of North Dakota, will provide another test of its resilience and overall impact.

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Table One: Trust Funds Summary

State	Alaska	Montana	New Mexico	North Dakota	Texas	Utah	West Virginia	Wyoming
Trust Fund Title	Alaska Permanent Fund	Coal Severance Tax Trust Fund	Severance Tax Permanent Fund	North Dakota Legacy Fund	Texas Permanent School Fund, Permanent University Fund	Permanent State Trust Fund	West Virginia Future Fund	Permanent Wyoming Mineral Trust Fund
Year of Adoption	1976	1976	1973	2010	1854, 1876	2008	2014	1976
Constitutional Amendment or Statute	Constitutional Amendment	Constitutional Amendment	Constitutional Amendment	Constitutional Amendment	Statute, Constitutional Amendment	Constitutional Amendment (optional deposit into permanent fund)	Statute	Constitutional Amendment
Constitutional Amendment Process	Two-thirds legislative vote, simple majority of voters		Simple majority legislature, simple majority of voters	1. Two percent of resident population to be placed on statewide ballot, simple majority of votes to adopt amendment. 2. Proposed amendment adopted in both legislative chambers, simple majority statewide voters	Two-thirds legislative vote, statewide majority approval from voters.	Two-thirds legislative vote, statewide majority of voters in general election	two-thirds legislative vote, simple majority of voters	Two-thirds legislative vote, simple majority of voters
Major Revisions	No	No	Constitutional Amendment to increase expenditure distribution (2005)	No	Constitutional Amendment (1876) adding funds to Constitution; Distribution Amendments (2005, 2011)	Constitutional Amendment (2012) requiring portion of severance taxes to be deposited into permanent fund	No	Constitutional Amendment (1996) to invest revenues into corporate stocks.
Use of Earnings	Citizen dividends and general fund	General fund, education, infrastructure, remediation and economic development	General fund, education, infrastructure, and economic development	Undecided	Elementary and secondary education, University of Texas	Economic diversification, capital and infrastructure	earmarked for education, workforce development, infrastructure, tax relief projects	General fund
Size of Trust (Principal)	\$53.9 billion	\$952.9 million	~\$5 billion	\$2.4 billion	\$ 37.7 billion and \$17.2 billion	\$137 million		\$5.6 billion

