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INNOVATIVE ALABAMA

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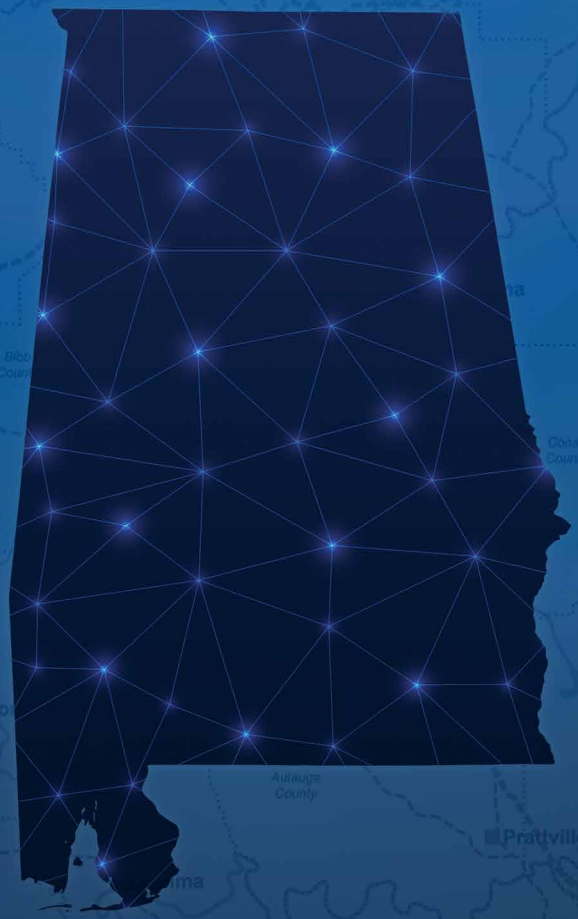

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2. If You Build It, They Will Come

HIGH-SKILL WORKERS AND ALABAMA'S OUTDOOR RECREATION INFRASTRUCTURE

ALEXANDER GALETOVIC, STEPHEN HABER, JORDAN HORRILLO, AND ISABEL LOPEZ

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EXECUTIVE SUMMARY

A crucial component of establishing an innovation ecosystem within a state is attracting and retaining human capital. Alabama is exceptionally endowed with a vast array of natural assets that can be leveraged to expand its outdoor recreation industry, enhancing the state's attractiveness for high-skill individuals and new tourists, as well as yielding substantial returns for both rural and urban communities. Currently, many natural assets remain underdeveloped within Alabama, holding the state back from realizing its full potential to draw high-skill workers and to establish itself as an outdoor recreation powerhouse within the southeastern region of the United States.

To develop these natural assets, Alabama needs to ramp up spending on its outdoor recreation infrastructure. Funding may come from combining private philanthropy, state funds, federal funds, and revenue from user fees on outdoor recreation infrastructure. Because projects will generate externalities and incremental economic activity, projects will, over time, also generate a higher tax revenue for the state and contribute to their own funding.

This chapter's primary recommendation is the creation of a joint commission to expand the supply of outdoor infrastructure throughout the state. First, it would draw on Alabama's Statewide Comprehensive Outdoor Recreation Plan and input from entrepreneurs, municipalities, and other stakeholders to identify projects that would generate significant positive externalities for the state. Second, the joint commission would be a vehicle through which funding sources, beyond those already in place, would be identified and pursued. Third, the joint commission would work with state agencies, municipalities, nonprofit organizations, and the private sector to plan outdoor recreation infrastructure projects, select developers, distribute funds, and ensure the delivery of projects and services.

Introduction

Innovation is the creative act of seeing a demand curve for a product that may not yet exist, and then putting together the components necessary to bring that product or service to

market. Innovation is also the creative act of seeing how to produce an existing product or service more efficiently, and then putting together the components necessary such that the price falls and the market expands.

Successful innovations generate what economists call Ricardian rents—they can produce more revenue per dollar of input than the least productive producer in that same market. A quintessential example is the iPhone; Apple is able to sell iPhones at about three times the price charged by other smartphone manufacturers, while its production costs are only twice as high. Apple can obtain more revenue per dollar of input because consumers value iPhones more than they value other smartphones.

The Ricardian rents from innovation are captured not just by firms in the form of higher profits. Some of the rents are captured by the firm's employees in the form of higher wages than they would have earned otherwise. Some of the rents are captured by the government in the form of a higher tax revenue than it would have received otherwise. Innovation, and the Ricardian rents it generates are, in short, the basis for a prosperous society.

The Challenge of Creating an Innovative Economy

If innovation is such a good thing, then why don't we see it happening everywhere? The reason is that turning an idea into a commercial product that consumers value requires the recruitment and retention of people with a wide variety of specialized knowledge and skill sets. Some of those people know how to invent new technologies. Others know how to combine technologies that already exist in novel ways. Still others know how to secure financing, write contracts, navigate regulatory mazes, build prototypes, set up manufacturing facilities, and market consumer products.

Innovation therefore happens in environments in which there is a pool of people who have invested in developing specialized knowledge and skill sets that are complementary to one another. Such a pool of people can be home grown, but if one is trying to jump-start an innovative economy, at least some of those people must be recruited from outside.

Recruiting High-Skill Workers and Sustaining Communities

Persuading people with scarce skills to move thousands of miles to new homes and new communities is not an event; it is a process. It often starts with short visits that plant a seed in their minds. Those seeds germinate into an idea, and in time they flower into the decision to relocate.

Those crucial, short initial visits often occur because of tourism; and when it comes to people who have invested in the kinds of specialized human capital that is necessary

to launch innovative firms in the twenty-first century, that tourism tends to be focused on outdoor recreation.[1] Whitewater rafting, kayaking, canoeing, hiking, backpacking, bird-watching, skiing, mountain and road biking, rock climbing, and the like, tend to draw high-skill workers and entrepreneurs and then reveal to them the other benefits that will come when they relocate, such as lower housing costs, shorter commutes, and friendlier communities. It would be difficult, in fact, to disentangle the recent high-tech booms taking place in Salt Lake City, Utah; Bend, Oregon; and Boulder, Colorado, from the opportunities they provide for outdoor recreation.

Outdoor recreation is not, however, simply a way to recruit high-skill workers; it is also a way to share the Ricardian rents generated by innovative industries broadly. When an employee of an innovative firm takes a walk on an urban trail and stops along the way for coffee or lunch, she is sharing some of those rents with the restaurant and its employees. When she takes a weekend trip to go rock climbing, she is sharing some of those rents with local outfitters, guides, gas stations, grocery stores, and hotels. The scale of those outdoor recreation expenditures is staggering; across the United States in 2019 value added from outdoor recreation was $460 billion, roughly 2 percent of the US GDP.[2] In short, outdoor recreation, whether urban or rural, helps foster an environment that is socially and politically sustainable.

Permit us to illustrate the idea of shared prosperity through outdoor recreation by pointing to the examples of Placer and El Dorado Counties in California, which stretch from the foothills of the Sierra Nevada all the way to Lake Tahoe, at the border with the state of Nevada. Placer and El Dorado Counties have the seventh- and twelfth-highest median household incomes in the state—at $97,688 and $86,202, respectively—but neither contains a high-tech hub or a manufacturing facility.[3] Their westernmost towns are suburbs of the state capital; but as one heads east, into the hills, they become highly rural. Those rural areas boast the most intensively kayaked and rafted whitewater rivers in the United States, seven major ski resorts, and some of the most popular hiking and backpacking trails in the western United States. Those outdoor recreation attractions sustain countless numbers of small and midsize business—outfitters, bike and ski shops, restaurants and cafes, hotels, gas stations, roadside fruit stands and pie shops, and the like.

To give a sense of what this looks like on the ground, consider the town of Coloma, located on the banks of the south fork of the American River in El Dorado County. Coloma was founded as a gold rush town in the 1850s, but when the gold played out, so did the town; its civic buildings were abandoned and left to decay. In the 1970s, the local economy began a comeback based on the emerging sport of whitewater kayaking and rafting. Fifty years later the most important businesses continue to be tied to the town's proximity to whitewater, such as guide services, equipment rentals, and campgrounds. As whitewater tourism grew, however, other tourism-focused businesses began to emerge. Among the most

important of these are wineries, which began to spring up in the 1990s, and which draw Silicon Valley tourists more interested in granite tasting counters than in Class IV rapids. All of this happened, we hasten to add, without disturbing the social fabric of the town; as of 2019 Coloma still had only 487 inhabitants, and the average commute time to work was eighteen minutes. The median household income was, however, $125,521 and the poverty rate was less than 1 percent.[4]

Hypothesis: Alabama's Natural Endowment Is an Undercapitalized Asset

Alabama has natural endowments—rivers, lakes, mountains, forests, coastline, flora and fauna—that give it tremendous potential to draw and retain high-skill workers and firms at the frontiers of their industries and to then share the rents from those industries broadly across the state. Some of those endowments have been developed by passionate and dedicated Alabamians working through private enterprises, nonprofits, joint ventures, local governments, and state agencies. They have, however, been constrained by the resources at their disposal.

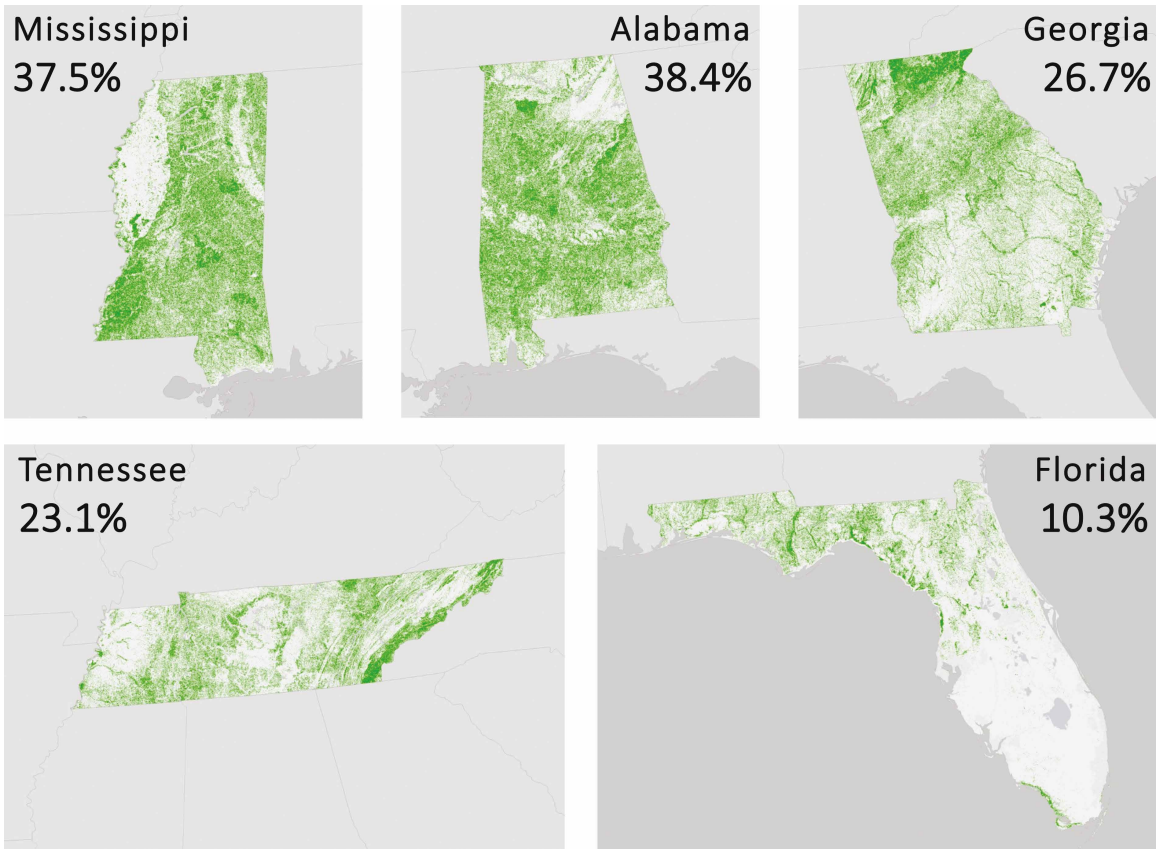
A substantial, coordinated, and long-term program of investment in outdoor recreation infrastructure will yield substantial returns to the state. Some of those returns will be direct, in the form of dollars spent by out-of-state tourists. Some of those returns will be indirect, in the form of the ability of the state to recruit and retain a pool of people with the skill sets necessary to generate the innovative firms that produce Ricardian rents. Some of those returns will come in the form of positive externalities for rural areas—demand for outfitters, guide services, hotels, restaurants, and the like, by high-skill workers in innovative industries. And some of those returns will come in the form of positive externalities for urban areas—demand for housing, restaurants, cafes, and the like along new (or expanded) urban walking trails, bikeways, and blueways.

Alabama's Natural Endowment

We do not think it would take lengthy argumentation to make the case that Alabama has a natural endowment well suited to developing a vibrant outdoor recreation economy. Figure 1, which illustrates the forested surfaces of Alabama and its neighboring states, shows that roughly two-fifths of the state is densely forested. This means that Alabama is about 40 percent more forested than Georgia, 60 percent more forested than Tennessee, and close to four times as forested as Florida. Among its neighbors, only Mississippi rivals it.[5]

Figure 2, which illustrates Alabama's surface water (rivers, streams, lakes, and ponds), and that of its neighboring states, shows that Alabama's forests are paired with abundant lakes, ponds, rivers, and streams. Alabama boasts more surface water area per square mile of territory (3.4 percent) than Tennessee (2.2 percent), Mississippi (3.1 percent), and Georgia (3.2 percent). Only Florida (at 18.5 percent) exceeds Alabama.[6]

Figure 1. Forested land in Alabama and its neighboring states



Source: Tree Canopy Cover, National Land Cover Database (NLCD) 2016 Products (ver. 2.0, July 2020): US Geological Survey data release.

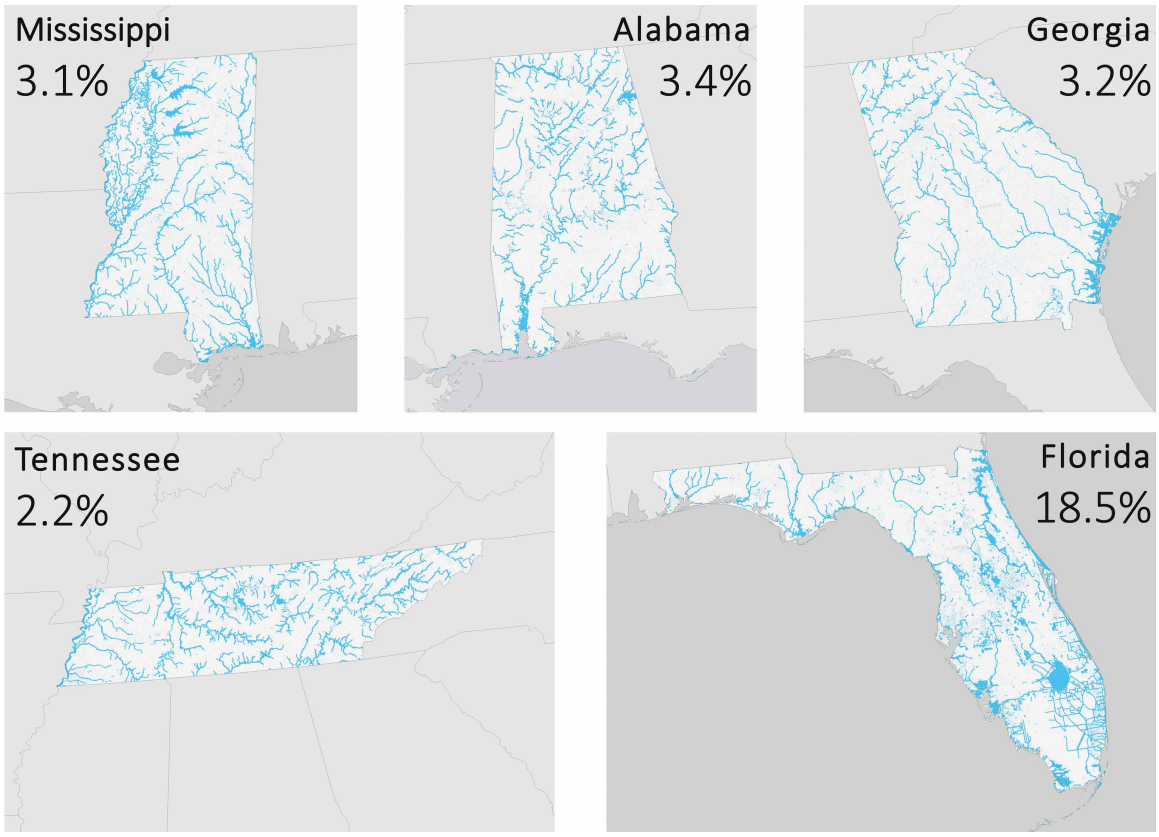
Two facts bring these statistics about Alabama's freshwater endowment to life. First, it is possible to canoe the 650 miles from Weiss Lake, in northeastern Alabama, near the border with Georgia, to Mobile Bay on the Gulf of Mexico near the border with Mississippi, with only nine short portages around dams and locks.[7] Second, Alabama's rivers, lakes, streams, and wetlands are home to more species of aquatic and semiaquatic animals than any other state in the country.[8] From the point of view of kayakers, canoeists, fishers, hunters, and bird-watchers, Alabama is a wonderland.

Alabama's Recreation Infrastructure

It is one thing to have a favorable natural endowment, and another to take full advantage of it. The first is given by nature; the second is the result of investments in outdoor recreation infrastructure.

There is no single agreed-upon metric that captures the degree to which a state takes advantage of its natural endowment. A number of different indicators—some of which

Figure 2. Surface water coverage in Alabama and its neighboring states



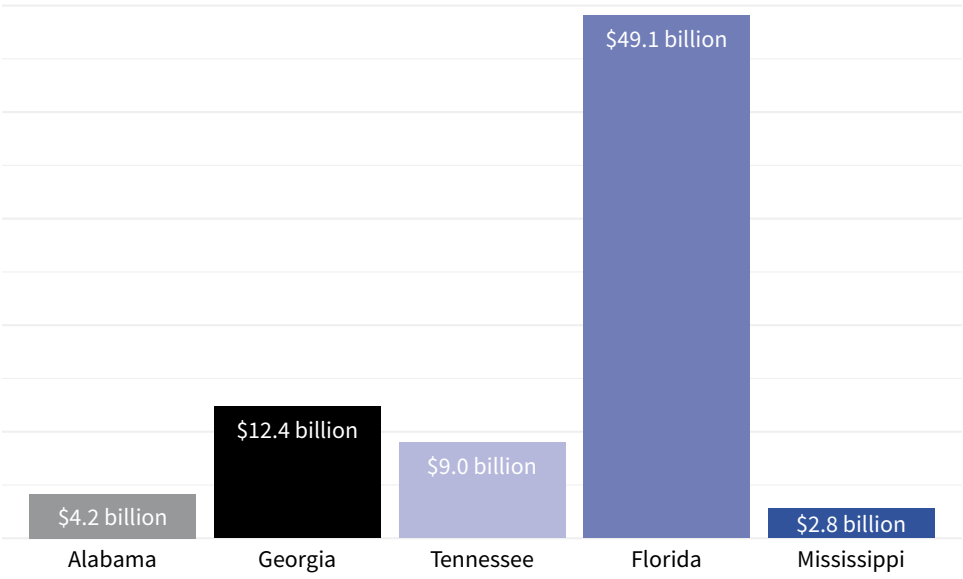
Sources: US Geological Survey, 2019, National Hydrography Dataset, ver. USGS National Hydrography Dataset Best Resolution for Hydrologic Unit 4, 2001 (October 2, 2019).

focus on outcomes and some of which focus on inputs—all point, however, to the same conclusion: Alabama has not taken full advantage of its endowment.

One straightforward way to measure the outcome of Alabama's outdoor recreation infrastructure is to listen to what Alabamians themselves say. A survey conducted for Alabama's 2013–18 Statewide Comprehensive Outdoor Recreation Plan found that 93 percent of Alabama residents stated that outdoor recreation was important or very important to them. Eighty-four percent of Alabamians stated that recreational trails were important or very important to them. Only 56 percent of the respondents, however, said they were satisfied with outdoor recreation facilities and trails in Alabama. Perhaps most pointedly, 47 percent of respondents said they traveled outside the state to participate in an outdoor recreation or trail-related activity.[9] Importantly, the survey also revealed that they tended to visit neighboring states whose natural endowments are not unlike those of Alabama: Tennessee, Georgia, and Florida.[10]

Another way to measure the outcomes of investments in outdoor recreation infrastructure is to look at the revenue it generates. As figure 3 shows, there is a substantial difference

Figure 3. Outdoor recreation industry value added by state, 2019



Source: US Department of Commerce, Bureau of Economic Analysis.

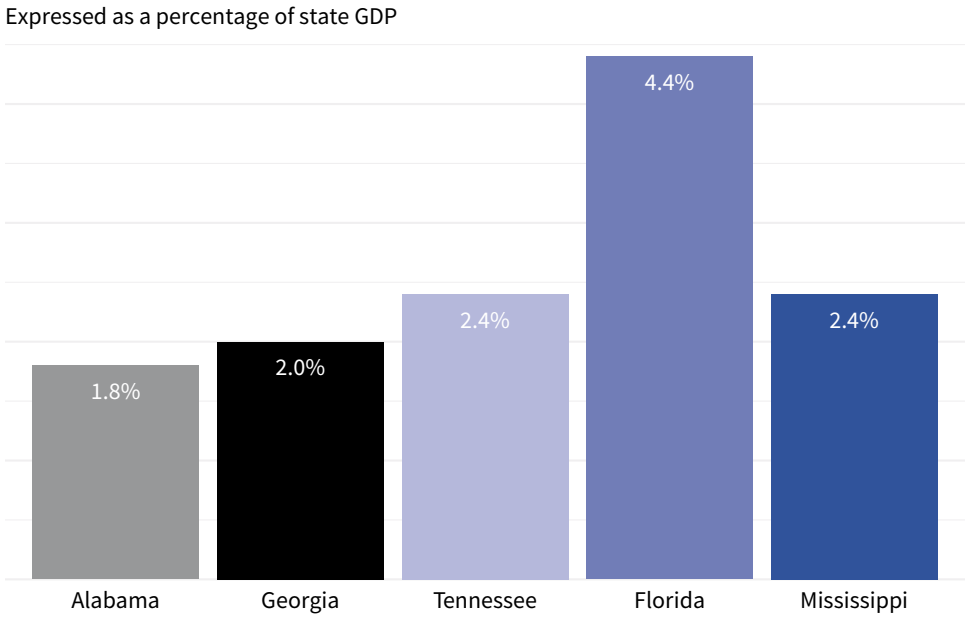
between the revenue earned from outdoor recreation across Alabama and across its neighboring states—and Alabama is at the bottom of the distribution. Florida is an outdoor recreation giant, with outdoor recreation accounting for $49.1 billion in value added.[11] By contrast, outdoor recreation accounts for only $4.2 billion of value added in Alabama.[12] This is slightly higher than in Mississippi ($2.8 billion), but less than half of what is generated in Tennessee ($9.0 billion), and one-third of what is generated in Georgia ($12.4 billion).[13]

As figure 4 shows, these differences in outcomes persist even if we account for differences in the size of the state economies, by expressing the data as a percentage of state GDP. In fact, Alabama moves to the very bottom of the distribution, with outdoor recreation accounting for only 1.8 percent of GDP, as compared with 2.0 percent in Georgia, 2.4 percent in Tennessee, 2.4 percent in Mississippi, and 4.4 percent in Florida.

Yet another way to measure outcomes is the number of jobs generated by outdoor recreation. As figure 5 shows, Alabama is at the low end of the scale, generating only 62,687 jobs, putting it ahead of Mississippi (33,592 jobs), but well behind Tennessee (106,012 jobs), Georgia (143,122 jobs), and Florida (511,100 jobs).

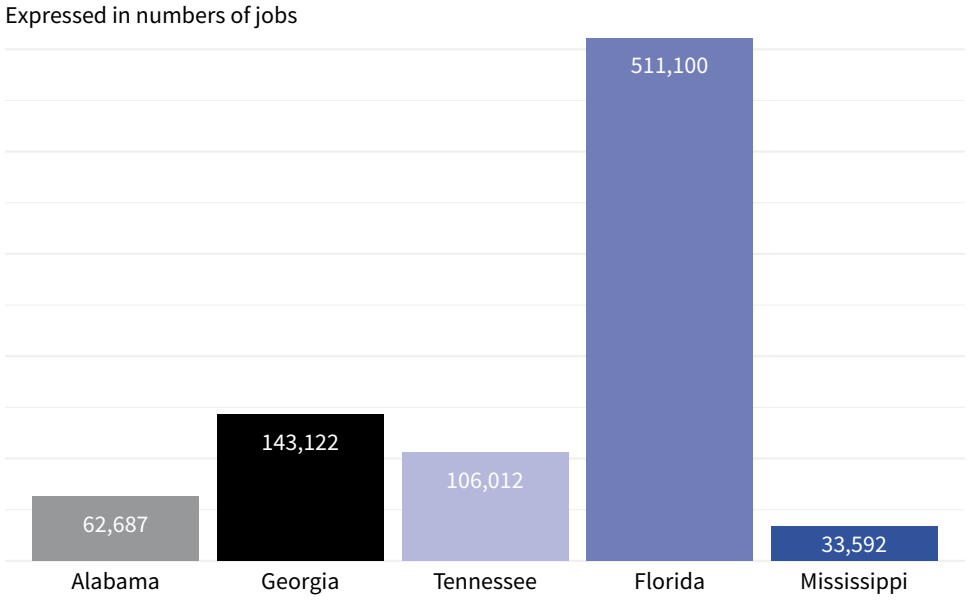
Low levels of job creation translate into low levels of total compensation from outdoor recreation. As figure 6 shows, compensation from outdoor recreation in Alabama totals only $2.0 billion. This compares favorably with Mississippi ($1.1 billion), but pales in comparison with Tennessee ($4.1 billion), Georgia ($6.3 billion), and Florida ($23.4 billion).

Figure 4. Outdoor recreation industry by state, 2019



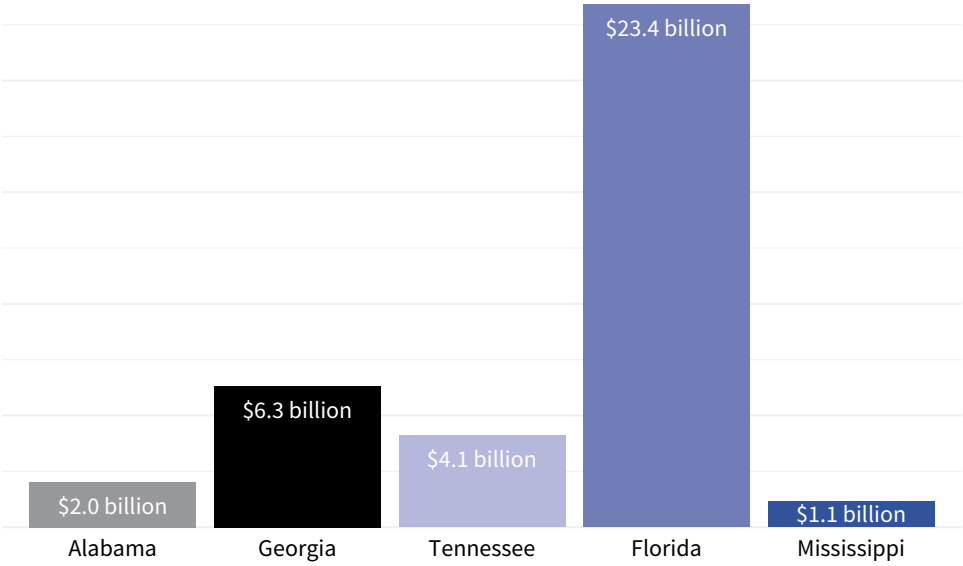
Source: US Department of Commerce, Bureau of Economic Analysis.

Figure 5. Outdoor recreation industry employment by state, 2019



Source: US Department of Commerce, Bureau of Economic Analysis.

Figure 6. Outdoor recreation industry compensation by state, 2019



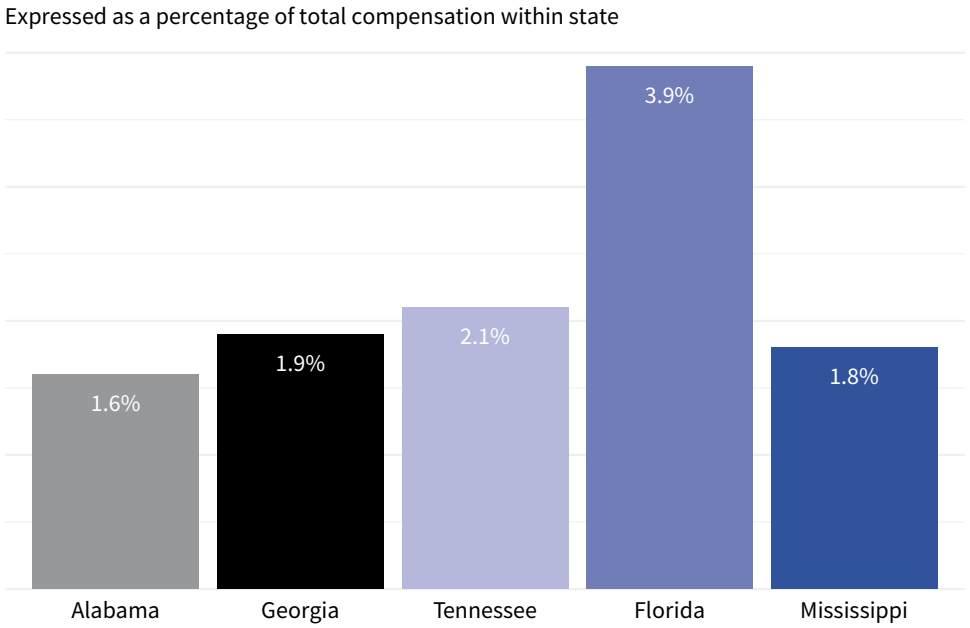
Source: US Department of Commerce, Bureau of Economic Analysis.

As figure 7 shows, this result holds even if we control for differences across states in terms of total compensation earned. In fact, when we make this adjustment, Alabama outdoor recreation (at 1.6 percent of total compensation earned) is behind that of Mississippi (1.8 percent), Georgia (1.9 percent), Tennessee (2.1 percent), and Florida (3.9 percent).

A simple set of facts, perhaps, brings all these numbers to life. Tennessee is much less well endowed than Alabama when it comes to lakes, ponds, rivers, streams, and forested areas (see figures 1 and 2). And, quite unlike Alabama, which has 60 miles of coastline, landlocked Tennessee has no beaches.[14] Nevertheless, Tennessee's outdoor recreation economy generates about twice as much revenue and 70 percent more jobs than Alabama's outdoor recreation economy.

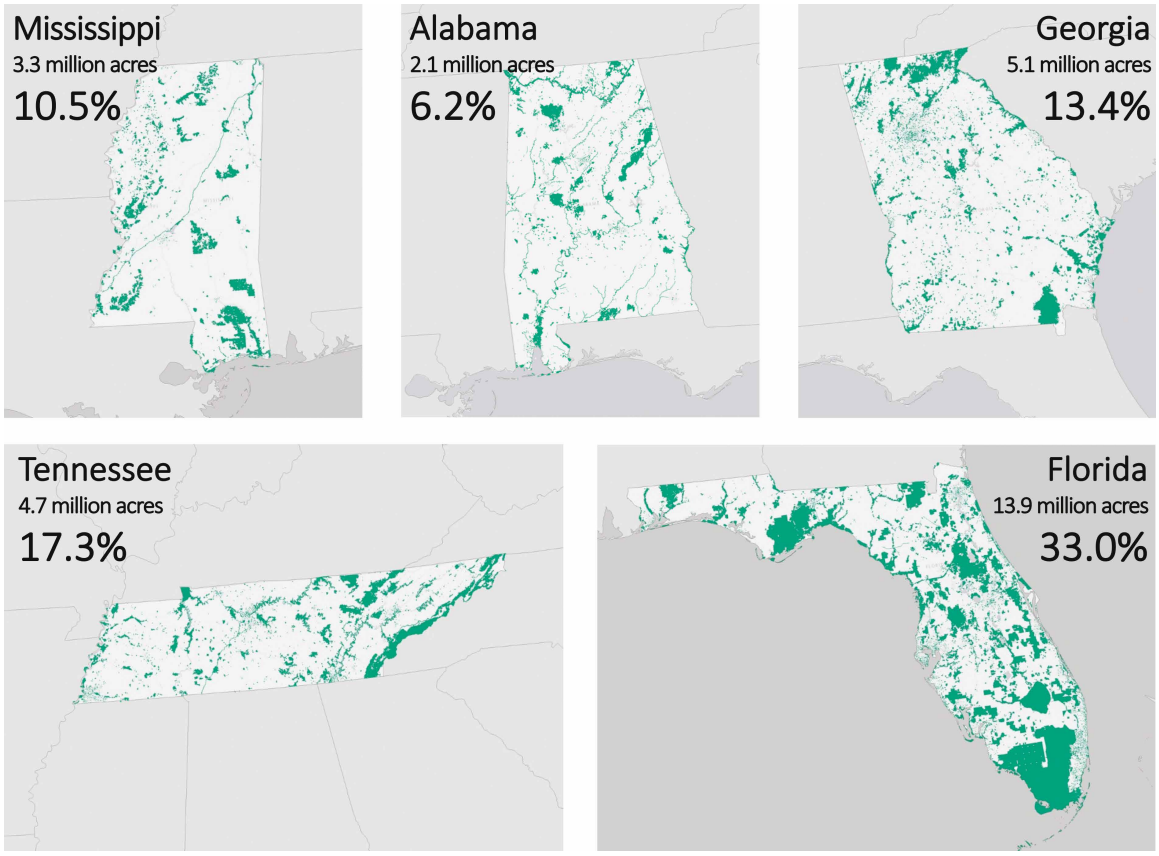
If we look at the inputs to outdoor recreation, we can understand why the outcomes across Alabama and its neighboring states are so different. A key input to outdoor recreation is publicly accessible land. Figure 8 presents the surface areas of Alabama and its neighboring states, with the publicly accessible lands marked in green. We draw the data from the US Geological Survey Gap Analysis Project, Protected Areas Database of the United States (PAD-US), which includes lands managed by the federal government (national parks, national forests, Bureau of Land Management lands), state governments (state parks, wildlife management areas, special opportunity hunting areas, and conservation trusts—such as Alabama's Forever Wild Land Trust, to which we shall return in detail), local governments (county parks, city parks), tribal lands open for recreation, and private parties (conservation easements).[15]

Figure 7. Outdoor recreation industry compensation by state, 2019



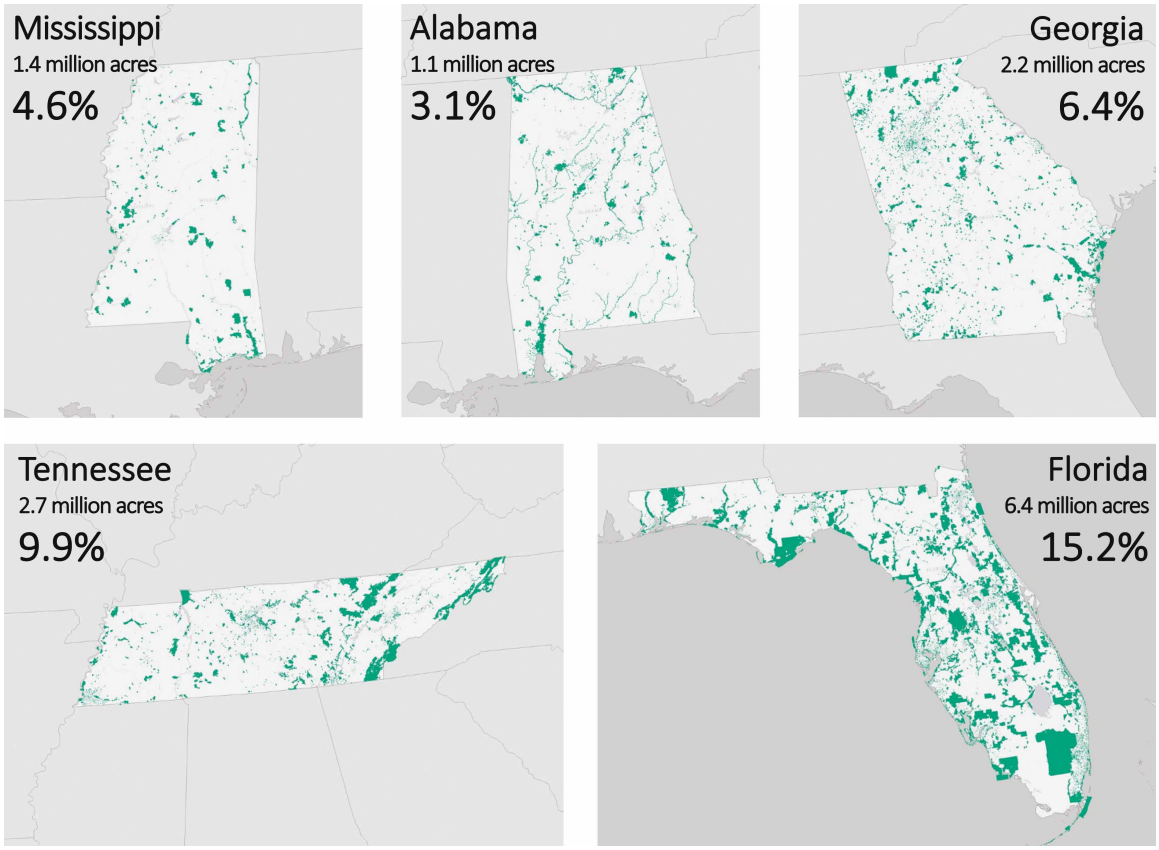
Source: US Department of Commerce, Bureau of Economic Analysis.

Figure 8. Publicly accessible land in Alabama and its neighboring states



Source: US Geological Survey Gap Analysis Project, Protected Areas Database of the United States (2020), 2.1.

Figure 9. Nonfederal publicly accessible land in Alabama and its neighboring states



Source: US Geological Survey Gap Analysis Project, Protected Areas Database of the United States (2020), 2.1.

The absolute differences across states in publicly accessible lands are substantial, with Alabama at the low end of the scale. In ascending order, Alabama has the smallest amount, at 2.1 million acres, followed by Mississippi (3.3 million acres), Tennessee (4.7 million acres), Georgia (5.1 million acres), and Florida (13.9 million acres).

These differences remain even if we control for differences in the size of states. As figure 8 shows, publicly accessible lands account for only 6.2 percent of Alabama's land area, as compared with such lands in Mississippi (10.5 percent), Georgia (13.4 percent), Tennessee (17.3 percent), and Florida (33.0 percent).

One might be tempted to argue that the relatively modest amount of publicly accessible land in Alabama is a function of the fact that the federal government's footprint in Alabama is much smaller than in neighboring states. Figure 9 therefore removes federal lands from the analysis. As it shows, the results are materially the same. Roughly speaking, Mississippi dedicates about 1.5 times more of its land to publicly accessible recreation than Alabama,

Georgia twice as much, Tennessee three times as much, and Florida close to five times as much.

These differences in publicly accessible lands translate into fewer trails for hiking, backpacking, bird-watching, mountain biking, and the like. The AllTrails app, which is widely used by hikers and backpackers, shows the number of trails constructed and marked within a state. While the raster image files that would allow us to measure the length of each trail are proprietary to AllTrails, it is reasonable to believe that there are no systematic differences in average trail lengths across states. The AllTrails data suggests that Alabama lags in trail development, with 721 trails registered, compared with Georgia's 1,301, Tennessee's 1,529, and Florida's 1,899. Alabama surpasses only Mississippi, which has 185 trails listed.[16]

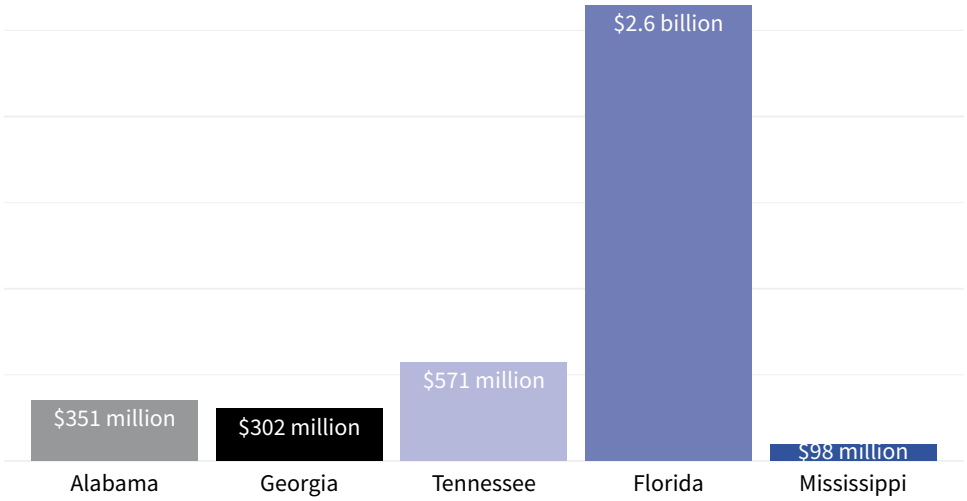
The Funding Gap

One inference that may be drawn from this data is that Alabama outdoor recreation is underfunded relative to the task of enlarging publicly accessible lands, trails, and other outdoor infrastructure. Alabamians seeking to develop trails and other outdoor infrastructure in their local communities leverage federal Recreational Trails Program and Land and Water Conservation Fund grants. These federal programs provide limited funds, however. The apportionments for Alabama in FY 2020 were only $1.7 million for the Recreational Trails Program and $3.4 million for the Land and Water Conservation Fund.[17] The funds allocated through these programs are not sufficient, nor are they necessarily meant, to fund outdoor recreation, or even trail development alone, in any state. They are meant as adjuncts to funding from states or private philanthropy.

In Alabama, the agency charged with the development and maintenance of state parks and other state-owned lands, conservation efforts, environmental protection, and wildlife-related law enforcement activities is the Alabama Department of Conservation and Natural Resources (ADCNR). The agency's 2021 budget, compared with that of its counterparts in neighboring states, can be seen in figure 10.[18] Alabama's budget ($351.4 million) exceeds Mississippi's ($98.7 million), is of the same order as Georgia's ($301.9 million), but is smaller than Tennessee's ($570.9 million), and Florida's ($2,647.7 million).

Importantly, ADCNR receives almost no funds from the state budget. For FY 2020–21 ADCNR's total budgeted expenditures added up to $361.9 million.[19] These were funded from three sources: The most, $168.2 million, was from federal funds, primarily from the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE Act).[20] Some $88.3 million was generated by ADCNR itself, mainly from hunting and fishing licenses ($23.1 million) and park visitor fees ($43.9 million). And $67 million came from various sources, but mainly the federal Gulf of Mexico Energy Security Act (GOMESA, which provided $26 million)[21] and reimbursements from the

Figure 10. Budgets for state fish and wildlife management agencies, 2021



Sources: State of Alabama, Executive Budget, Fiscal Year 2021, C-12; Georgia Governor's Office of Budget and Planning, HB 80-AFY 2021 Appropriations Bill; State of Tennessee, Department of Finance and Administration, The Budget, Fiscal Year 2020–2021, B-293; Florida Senate, SB 2500 (appropriations for FY 2021); Mississippi Legislative Budget Office: Statement VI: Total State Budget Recommend for Fiscal Year 2021.

BP oil spill Natural Resource Damage Assessment ($22.7 million).[22] Indeed, three funding sources—the RESTORE Act, GOMESA, and the BP oil spill assessment—add up to more than half of the department's 2020–21 funding. Less than $6 million of ADCNR's funding comes from state excises on cigarettes and fuel. Figure 11 summarizes the data, showing the major categories of the FY 2021 budget by funding source.

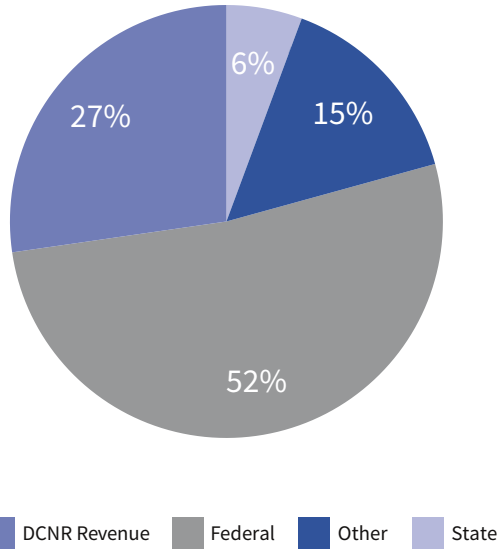
We validate the use of budgeted funds, rather than actual receipts, by examining the actual receipts for FY 2019 and 2020. As can be seen in figure 12, the actual data shows that ADCNR revenue makes up a larger percentage of spending than federal funds do, but there is little difference in the percentage of funds from state taxes.

When all the different metrics are taken together, a consistent picture emerges: there is plentiful room for investment and potential for growth in Alabama's outdoor recreation industry. One can imagine a future in which the state's impressive natural endowment is more fully deployed as an asset to attract and retain high-skill workers who will then share the rents from their innovative industries with Alabama's rural areas.

Building from Strength: The Achievements of Passionate Alabamians

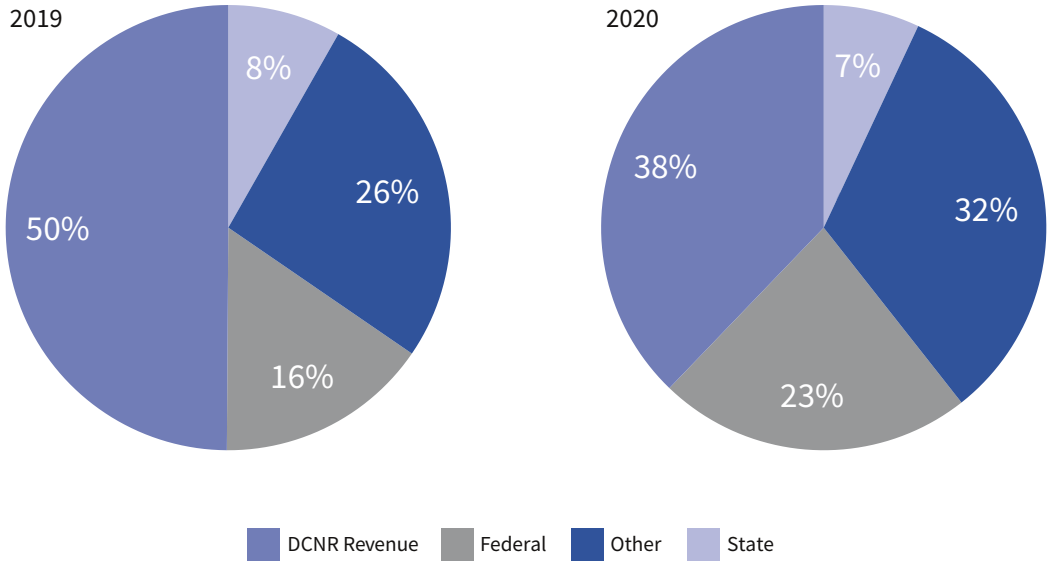
If we have learned one thing from our visits to Alabama, it is that the state is blessed with a rare asset: decent, hardworking, public-spirited people. Some of them lead state agencies,

Figure 11. ADCNR budgeted revenue, by funding source, FY 2021



Source: Alabama Department of Conservation and Natural Resources, *2019–20 Annual Report*.

Figure 12. ADCNR actual revenue, by funding source, FY 2019 and FY 2020



Sources: Alabama Department of Conservation and Natural Resources, *2018–19 Annual Report* and *2019–20 Annual Report*.

some are researchers at universities, others work for nonprofit organizations, and yet others are in the private sector. The programs and initiatives they have launched exemplify the types of investments that can be made to capitalize on the state's natural endowments.

If we have learned a second thing from our visits to Alabama, it is that these passionate people are working with very modest budgets. A substantial, coordinated, and long-term program of investment that draws on the expertise and passion of the Alabamians already doing great things for their state—and that gives them a substantial voice in how those funds are spent—will yield substantial returns.

It is beyond the scope of this report to provide an assessment of every outdoor recreation program in the state. We therefore describe six programs to show how different public-private sector combinations, using a variety of governance structures, are investing in outdoor recreation infrastructure.

The Forever Wild Land Trust

Among Alabama's most far-reaching outdoor recreation projects is the Forever Wild Land Trust (FWLT), which is administered by ADCNR. Most of Alabama's state parks were created in the 1940s. In order to provide greater habitat conservation and public recreational opportunities, the FWLT was created in 1992. Its mission to create state-owned nature preserves and recreation areas is particularly important considering that since it was established, 143,000 acres of lands leased from private owners for the purpose of public hunting have been withdrawn from ADCNR's wildlife management areas. The only funding method to replace those large tracts, or to establish state parklands beyond those created in the middle of the last century, is the FWLT. These acquisitions tend to be strategic; they often allow sections of parks or wildlife management areas to be connected to one another.

It appears that considerable thought was devoted to the FWLT's governance structure when it was set up. The constitutional amendment that established the FWLT specifically states that land can be purchased only from willing sellers; no FWLT land can be acquired through state condemnation powers. Individuals nominate tracts of land for purchase, which the FWLT board of trustees may then offer to purchase at the appraised fair market value. The FWLT board is required to obtain at least two appraisals prior to acquiring a nominated tract, and if there is more than a 10 percent difference between the two appraisals, a third reconciliation appraisal is required. An affirmative vote of at least nine of the fifteen FWLT board members is required to authorize the acquisition of a nominated tract. The FWLT board is drawn from Alabama's universities and the private sector; public officials serve in an ex officio capacity.[23]

Funding for the FWLT is generated by interest earned from offshore natural gas royalties deposited into the Alabama Trust Fund. The FWLT receives 10 percent of the distributed

interest, capped at $15 million for any given year, which will continue until 2032. An additional, though minor, source of funding is the Forever Wild Land Trust state license plate; for $50 per year, Alabama drivers can purchase the tag, with $42.50 from each sale going to the FWLT.

Importantly, funds from the FWLT can be counted by ADCNR and other state agencies in applications for federal grants that require state matches. The FWLT is the sole source of such matching funds; without it, it would not be possible for the state to leverage conservation and trail-related federal grants.

The FWLT has had a substantial impact on the amount of publicly accessible land. As figure 13 shows, it has expanded lands accessible to the public by close to 12 percent.[24] To give a sense of scale, the FWLT manages 210,411 acres, roughly one-half of 1 percent of the total land area in Alabama.

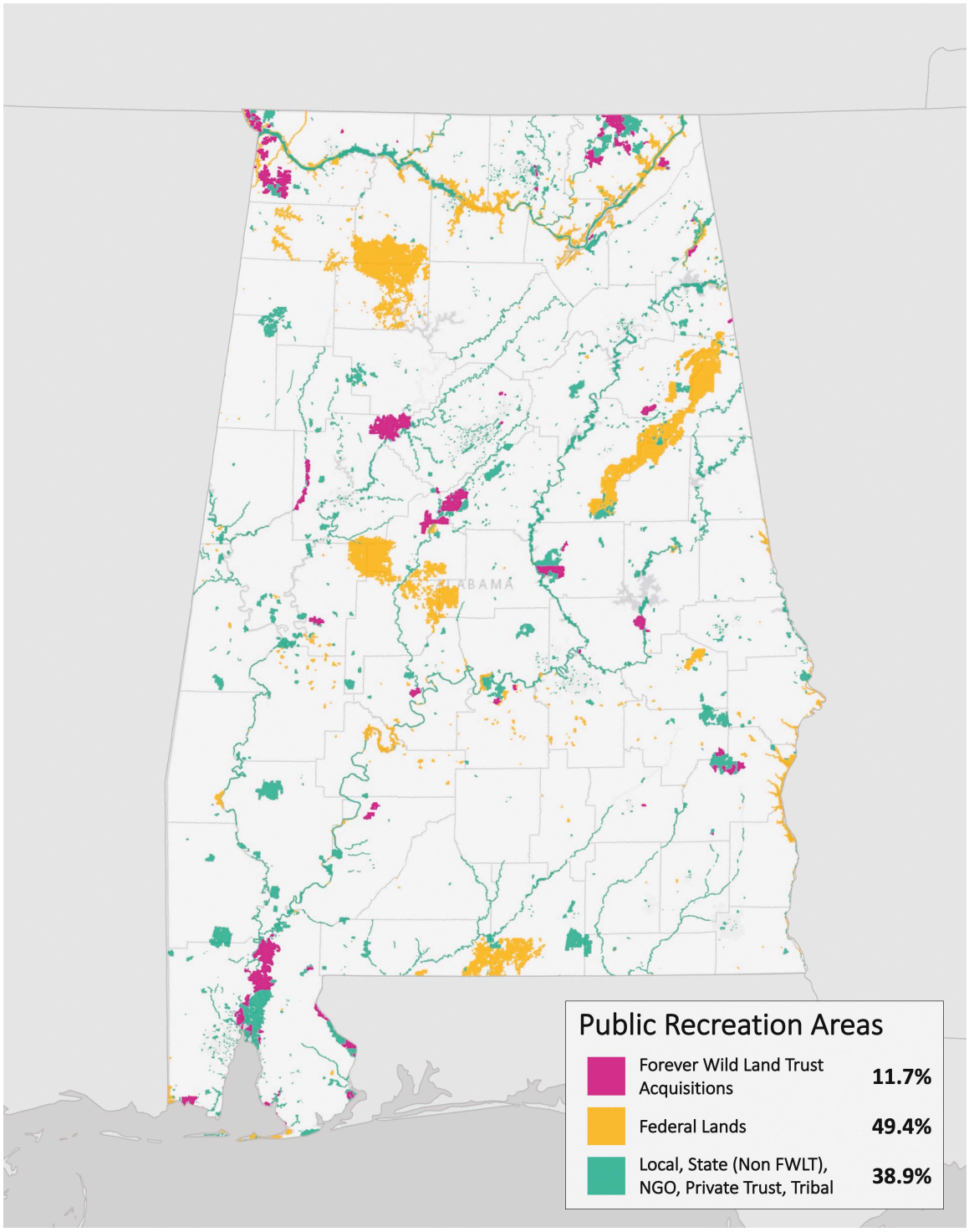
Nevertheless, the FWLT's budget of $15.5 million per year is modest compared to the scale of the challenge.[25] Some back-of-the-envelope calculations perhaps provide a sense of that gap. As we note above, Alabama has the lowest absolute amount of acreage and the lowest relative percentage of its land area dedicated to publicly accessible outdoor recreation. A modest goal would be to achieve the same absolute amount of nonfederal publicly accessible land as Mississippi (which has the lowest amount of such land among Alabama's neighbors, 1.4 million acres, compared with 1.1 million acres in Alabama). During FY 2019–20, the FWLT acquired 6,382 acres.[26] The implication is that at the current levels of funding, Alabama would not obtain parity with Mississippi until 2067.

The Gulf State Park Redevelopment

The Gulf State Park redevelopment exemplifies the combination of a state agency, a university, and multiple, specialized private firms to produce a state park that features a flagship hotel as a major attraction. In the wake of Hurricane Ivan in 2004, Gulf State Park sustained damage and the park's hotel—located directly on the coastline—was left in disrepair and abandoned. In 2010 the Deepwater Horizon oil spill occurred, which resulted in commitments by BP to invest in the communities and ecosystems affected by the spill. ADCNR used $140 million of those funds to revamp the infrastructure of Gulf State Park, with a portion of that money allocated to the development of a new resort hotel—the Lodge at Gulf State Park.[27]

A deliberate, collaborative, and forward-thinking planning process and execution was a pillar of the project. While Gulf State Park is an operation of ADCNR, the University of Alabama Center for Economic Development (UACED), about which we will return in greater detail below, was brought in to play a major role in planning, designing, and managing the redevelopment project. The UACED, in turn, contracted the design firm Sasaski Associates

Figure 13. Forever Wild Land Trust acquisitions, federal lands, and state, local, and NGO holdings in Alabama public recreation areas



Source: US Geological Survey (USGS) Gap Analysis Project (GAP), 2020, Protected Areas Database of the United States (PAD-US) 2.1: US Geological Survey data release.

to lead the creation of a master plan for engaging community members, park visitors, and other stakeholders. The resulting master plan put forward a vision for the park rooted in the idea that sustaining the health of the park's 6,150 acres and seven ecosystems was directly related to the economic vitality of the larger region. It also embraced the notion that a focus on sustainability does not hinder economic objectives.[28] The development and construction work was then carried out by Skanska USA, the US branch of a major Swedish firm that specializes in sustainable large-scale construction projects. The 350-room lodge, as well as some other elements of the park's infrastructure, such as its restaurant, cabins, and cottages, is operated by a private vendor, Valor Hospitality Partners. The rest of the park's infrastructure, including its 16 miles of trails, a 496-site RV campground, and beach access sites, is managed by ADCNR.

The six-year project produced a revitalized Gulf State Park that serves as a benchmark for environmental sustainability. For example, the rebuilt lodge was relocated about two hundred yards behind the original structure to reduce the overall impact to the coastline, with native plant species used to restore dunes and the natural habitat. The Lodge at Gulf State Park is also the first-ever fortified commercial hurricane structure in the United States.

The Red Rock Trail System

Nonprofit organizations play key roles in the development of Alabama's outdoor recreation infrastructure. One example is the Red Rock Trail System, whose master plan was developed by the Freshwater Land Trust, a nonprofit that conserves lands and builds trails in central Alabama, in partnership with the Jefferson County Health Action Partnership, a community-based organization supported by the Community Foundation of Greater Birmingham, the United Way of Central Alabama, and the Jefferson County Department of Health.

The goal of the Red Rock Trail System is a regional greenway in Jefferson County that preserves green spaces while enabling active, alternative methods of transportation for county residents. At its simplest, the mission is to construct 750 miles of interconnected multiuse trails, parks, bike lanes, and sidewalks that will connect the 9,000-acre Red Mountain Park in the Oxmoor Valley to Ruffner Mountain preserve in eastern Birmingham.[29] As of December 2020, 125 miles of trails toward this goal had been completed.[30] At a more complex level, the mission of the system is to encourage healthy lifestyles and improve health outcomes in Jefferson County, enhance access to the county's natural resources, and cultivate a sense of community within the area.

Another goal of the Red Rock Trail System is economic development within Jefferson County. Trail building generates construction jobs, but perhaps more importantly, trails generate positive externalities by raising property values, increasing tourism, and providing a focal

point for new business development.[31] The Rotary Trail, which is a crucial connector in central Birmingham for the larger Red Rock System, and which opened to the public in 2016, is an example. The half-mile-long trail, which takes its name from the fact that the initial tranche of $2.5 million in funding came from the Birmingham charter of the Rotary Club, converted a vacant railroad right-of-way in a blighted part of the city into a landscaped walking/running/biking pathway.[32] News reports indicate that it has spurred the development of restaurants, bars, cafes, and condos next to and around it, thereby helping to revitalize the area.[33]

With more than 600 miles of trails yet to be constructed, significant investment is needed to complete the Red Rock Trail System. The plan proposes 250 miles of greenways as one of its central components, with average construction costs at $500,000 per mile.[34]

The Montgomery Whitewater Park

Municipalities also play important roles in the development of Alabama's outdoor recreation infrastructure. There are many examples, which include the development of waterways and trails, but perhaps the most ambitious such municipal effort is the Montgomery Whitewater Park. Scheduled to open in summer 2023, the 120-acre complex is envisioned as a recirculating whitewater rafting, kayaking, and canoeing facility constructed within walking distance of downtown Montgomery. The project is also envisioned to include climbing areas, zip lines, rope courses, and mountain biking trails.

The conception of the park is that two large markets will support its operating costs, while the park generates positive externalities for business development and employment growth in Montgomery County. The first of those markets is composed of families traveling on the I-65 corridor, which is a major cross-country north-south route, connecting Chicago to Mobile, Alabama. Along the way, it passes through other major cities such as Indianapolis, Louisville, Nashville, Huntsville, and Birmingham. The park's location, just off the I-65, is envisioned as an attraction to families from those cities transiting to and from the vacation destinations on Alabama's Gulf Coast. The second of those major markets is envisioned as the roughly seven thousand military, civilian, and government contractors, plus their families, stationed at nearby Maxwell-Gunter Air Force Base.

The land for the project is being donated by the City of Montgomery, which acquired the land from private landowners. Seventy percent of the development and construction costs of $50 million is being funded by Montgomery County, which has created a Community Cooperative District, composed of community leaders, to oversee the project. Most of that contribution will be financed from issuance of revenue bonds, for which the county is responsible. The state has committed an additional $5 million. The Poarch Band of Creek Indians, which has significant hotel and gambling operations in the Montgomery area

and in south Alabama, is also an investor in the project. Groundbreaking took place in the summer of 2021. The park is expected to open during the summer of 2023.[35]

Connecting with Birds and Nature Tours

One of our central points is that outdoor recreation creates opportunities for private initiative, including small businesses in rural areas. An example is Connecting with Birds and Nature Tours. As is often the case with small business enterprises in rural areas, Connecting with Birds and Nature Tours is an adjunct to an agricultural enterprise, in this case a 200-acre Black Angus farm operated by its third-generation owner, Christopher Joe, who started the business in 2018 to diversify the farm's sources of revenue.

Connecting with Birds and Nature Tours takes advantage of two facts: Alabama's forests, ponds, marshes, and lakes provide critical habitat for more than four hundred species of birds; and wildlife observation has become an outdoor recreation industry in and of itself. Connecting with Birds and Nature Tours has responded to this market opportunity by offering birding tours on Joe's Farm, either on a hayride trailer or by hiking its six miles of trails, to view wood stork, American white pelicans, white ibis, swallow-tailed kite, scissor-tailed flycatcher, bald eagles, great blue heron, great egret, osprey, Mississippi kite, and loggerhead shrike. It also crafts school field trips, which include lessons in tree identification, birdhouse building, and bird-watching. It generates income by charging a day-use fee.[36]

The University of Alabama Center for Economic Development/Cahaba Blueway

The UACED was founded in 1989 and serves as an economic outreach unit to access the school's resources, expertise, and existing university centers and programs to provide technical, grant-writing, planning, project management, and leadership assistance to communities, agencies, and organizations seeking to develop Alabama's economy.[37]

We have already had occasion to mention the UACED in connection with the rehabilitation of Gulf State Park, but the center plays an important role in many other outdoor recreation infrastructure projects. Indeed, it has been tasked with preparing the next Statewide Comprehensive Outdoor Recreation Plan (SCORP), which Alabama must submit every five years to be eligible for federal funding from the Land and Water Conservation Fund. We focus in this report on its role in developing the Cahaba River Blueway, but stress that this is just one of its initiatives.

The Cahaba Blueway is one of the major projects of the UACED. The Cahaba is the longest substantially free-flowing river in Alabama and is among the most biologically diverse rivers in the United States. It also connects some of the state's wealthiest communities around Birmingham with some of its most economically undeveloped communities farther

downstream. Although it is actively fished, it is only marginally developed for public recreation. The goal of the Cahaba Blueway initiative is to make the modest investments in infrastructure necessary for easy river access for kayaking, canoeing, paddle boarding, fishing, and floating, and to then provide marketing expertise, so that the Cahaba River emerges as a destination for recreational tourists. Tourism will, in turn, generate positive externalities for the communities that lie along the river by generating demand for hospitality and retail business, by making those communities more attractive to prospective residents, and by generating demand for better conservation practices that will benefit the entire river ecosystem.[38]

The Cahaba Blueway initiative involves a partnership with multiple organizations and agencies, many with financial resources that complement the technical expertise provided by the UACED. These actors include the Nature Conservancy, the Cahaba River Society, Cahaba Riverkeeper, the Freshwater Land Trust, Blue Cross and Blue Shield of Alabama, Sappi, the Alabama Black Belt Foundation, the City of Helena, the City of Trussville, Shelby County, and the National Park Service's Rivers, Trails, and Conservation Assistance Program. The UACED's role had been to serve as an educator for the leaders of cities and towns along the river, the developer of a brand for the Cahaba Blueway, and the creator of guidelines for standardized signage, as well as guidelines for the design, construction, and operation of river access infrastructure that communities can use. It has also identified Cahaba Blueway access sites that lie within lands that are publicly accessible. Finally, the UACED developed a website, cahabablueway.org, that provides information about how to access and stay safe on the river, as well as connects visitors to local tourism resources, hospitality providers, equipment suppliers, and outfitters.

We note that the UACED accomplishes its many initiatives, which extend beyond providing support for outdoor recreation development projects, with a full-time staff of only seven people.[39]

A Proposal: Building on Alabama's Existing Organizations and Structures

Alabama has a vast potential to transform its natural endowment into outdoor recreation attractions that will contribute to building a more innovative economy. The state can draw on two additional assets, beyond its natural endowment, to accomplish that goal: its hardworking and passionate citizens; and the experience those individuals have with a variety of governance structures for outdoor recreation initiatives.

There is, in our view, one major challenge: funding. ADCNR, the UACED, nonprofit organizations, municipal governments, and private initiatives have accomplished a great deal, but they operate with very modest budgets. The existing approach—patching together funds from multiple sources over the course of many years, project by project—is unlikely to

yield the kind of sustained investment that would be required to build and market Alabama outdoor recreation at a scale to recruit and retain high-skill workers. One can observe the results of that approach by comparing outdoor recreation outcomes across states, as we do in figures 3 through 7. The state bond issue of $85 million for state parks and historical sites, if approved by voters as an amendment to the state constitution this fall, would be an important step in renovating and improving existing facilities. It is not, however, an answer to the challenge of transforming Alabama's natural endowment into outdoor recreation attractions that will contribute to building a more innovative economy. Bear in mind that the rehabilitation of Gulf State Park and the reconstruction of its lodge, alone, required $140 million, and that the estimated cost to complete the Red Rock Trail System's 250 miles of greenways, alone, is $125 million.[40]

Raising and spending funds on a much larger scale than has been done in the past requires a concerted push by the state agencies, university research centers, municipal governments, nonprofit organizations, private initiatives, and the passionate people that lead them. We therefore recommend that the state build on its experience with the Alabama Trails Commission, by creating a Joint Commission for Outdoor Recreation Infrastructure, named by the governor, that includes broad representation across the public, private, and nonprofit sectors.[41]

The joint commission is not a replacement for any state agency, higher education center, nonprofit organization, or private initiative. Quite the contrary: its purpose is to reinforce them. The joint commission might, for example, include the commissioner of ADCNR; the director (or a program director) of the UACED; the leaders of nonprofit organizations with long-standing interests in promoting outdoor recreation and conservation, or with interests in promoting an innovative Alabama economy, such as the Freshwater Land Trust, Alabama Audubon, the Nature Conservancy, Ducks Unlimited, the Alabama Trails Foundation, and the Economic Development Partnership of Alabama; the mayors of three or four cities; a number of outdoor recreation entrepreneurs operating small-scale firms; and representatives from Alabama-based firms and foundations with demonstrated philanthropic track records.

We believe that broad representation on the proposed Joint Commission for Outdoor Recreation Infrastructure is crucial for three reasons: First, the myriad agencies, university research centers, nonprofits, and private initiatives require a forum that allows them to speak with a single voice, such that their message is concentrated and amplified. This is particularly crucial when it comes to raising funds from private philanthropy. Second, broad representation facilitates synergies across actors. Plainly put, when a group of smart, passionate people are in the same room, ideas, and ways to operationalize them, emerge that would not do so otherwise. Third, broad representation embodies a fundamental practice of good governance; interests must be balanced so that wise decisions are made, funds are stewarded with care, and projects are evaluated critically.

The joint commission would have three main charges: First, it would draw up and maintain a master plan for Alabama outdoor recreation with an eye to identifying projects that would generate significant positive externalities, estimate the funding necessary to undertake that investment plan, and estimate the net economic impact of these projects. We note that the UACED is preparing the next SCORP, which might serve as a point of departure for such a master plan.

Second, the joint commission would be a vehicle through which funding sources, beyond those already in place, would be identified and pursued. It is our sense that there are considerable sources of funding from private philanthropy in Alabama, but the importance of investment in outdoor recreation infrastructure has not yet been fully made clear to the philanthropic community. It is also our sense that there are considerable opportunities for state funding of public-private partnerships (PPPs), but there is no ready mechanism to evaluate such PPP proposals. In addition, it is our sense that there are considerable opportunities for the funding of Alabama's outdoor recreation infrastructure from federal programs. Indeed, as we write this, the US Senate is debating and amending a $1.2 trillion infrastructure bill—the Infrastructure Investment and Jobs Act (H.R. 3684). While it is beyond the scope of this report to assess every section and subsection of that bill for applicability to Alabama outdoor recreation, there appear to be several that might be applicable, such as section 11134, Recreational Trails Program; section 11133, Bicycle Transportation and Pedestrian Walkways; section 11206, Increasing Safe and Accessible Transportation Options; section 247, Maintaining and Enhancing Hydroelectricity Incentives; and section 40804, Ecosystem Restoration. Finally, it is our sense that users have a demonstrated willingness to pay for the use of outdoor recreation infrastructure. The fact that roughly half of the Alabamians surveyed in the last SCORP say that they travel out of state to enjoy outdoor recreation opportunities is, in our view, prima facie evidence of that willingness to pay. This revenue should fund at least part of the operation costs and maintenance of the outdoor infrastructure.

Third, the joint commission would work with state agencies, municipalities, and nonprofit organizations to plan outdoor recreation infrastructure projects, select developers, and ensure the delivery of projects and services. The selection of developers is critical. An outdoor recreation project involves the development of an area where service providers and users meet and interact, sustained by the area's infrastructure. Some outdoor recreation areas emerge with only minimal coordination, but for some projects it is more effective for a developer to design and deliver them, striving to maximize their value, by judiciously incorporating the service providers and amenities that attract users. Project design may be delegated to the developer under the supervision of the commission, or the commission may develop design capabilities.

The projects that come through the joint commission may be delivered through ADCNR, municipalities, nonprofits, or PPPs. Regardless of who delivers them, projects should be

reviewed and approved by the joint commission's board. In each case the board should assess the overall feasibility of the project, its interaction with other projects, the project's business plan, fee levels and structure, and funding sources.

A Note about Public-Private Partnerships

We believe that private-sector participation through PPPs will accelerate development of Alabama outdoor recreation infrastructure, as private investors can leverage the capacities of the private sector to execute projects.

There is, however, a misconception about PPPs that must be dispelled: they are not a source of free money. Under a PPP the government selects a private firm (the concessionaire) to build, finance, operate, and maintain an infrastructure project. The typical PPP contract term is long, usually between twenty and forty years. At the end of the contract term all ownership rights revert to the government. At that point the government can manage the infrastructure itself or it can initiate a new PPP to make additional investments in the infrastructure project or revamp it.

To understand why a PPP produces no fiscal savings, it is necessary to understand the distinction between financing and funding in a PPP. *Financing* refers to the up-front costs borne by the concessionaire to build the infrastructure, as well as the mechanisms by which the concessionaire mobilizes those funds through the sale of equity or debt. *Funding* refers to the sources by which the infrastructure generates revenue for the PPP. Funding is generated by user fees charged by the PPP, rents that it charges to other service providers (restaurants, gift shops, and the like), or government transfers.

Consider what happens to a government's balance sheet when we compare the financing of infrastructure using the traditional method of the government issuing debt that is funded by taxes versus using a PPP that is funded by a government transfer. As the first line in table 1 shows, the PPP "saves" 100 in current government spending. In line 2, 100 is still spent on the infrastructure project, regardless of how it is financed. As lines 3 and 4 show, however, taxpayers pay 100 in both cases: in the case of traditional infrastructure provision, future governments use 100 in taxes to pay 100 to bondholders; while in the PPP, future governments use 100 in taxes to pay 100 to the concessionaire and its investors.

Table 2 shows that the same reasoning applies to PPPs funded with user fees. The government seemingly "saves" 100 in current spending and debt (line 1) in order to build infrastructure costing 100 (line 2). It does this without the need to collect 100 in taxes (line 3). It does not, however, get something for nothing; it must relinquish 100 in user fees that it would have collected had it financed the project by issuing debt and then collected the user fees itself.

Table 1. Fiscal accounting: Funding from government transfers

	Traditional provision	*Public-private partnership*
Now:	Issue 100 in debt	"Save" 100 in debt
Now:	Spend 100 on infrastructure	Spend 100 on infrastructure
Future:	Collect 100 in taxes	Collect 100 in taxes
Future:	Pay 100 to bondholders	Pay 100 to concessionaire

Table 2. Fiscal accounting: Funding from user fees

	Public provision	*Public-private partnership*
Now:	Issue 100 in debt	"Save" 100 in debt
Now:	Spend 100 on infrastructure	Spend 100 on infrastructure
Future:	Collect 100 in user fees	Give up 100 in user fees
Future:	Pay 100 to bondholders	Concessionaire collects 100 in user fees

The argument for using a PPP to finance outdoor recreation infrastructure is not, therefore, because it relaxes a budget constraint, but because the addition of a private partner can yield efficiencies in the design, construction, and operation of that infrastructure. Such efficiencies can be substantial and produce a return to citizens in the form of reduced costs or better quality of service. Governments should therefore be mindful about such potential efficiencies—and select private partners accordingly. Indeed, a PPP should be chosen only when it is a more efficient means of provision than a public alternative.

Conclusion

Alabama has a vast endowment of natural assets that can be leveraged to expand its outdoor recreation industry, enhancing the state's attractiveness for high-skill individuals and new tourists, and yielding substantial returns to rural and urban communities. Nevertheless, natural assets remain underdeveloped. To develop these natural assets, the state needs to ramp up spending on its outdoor recreation infrastructure, particularly on projects that create externalities by attracting tourists, both within the state and from other states.

Additional funding is necessary to tap Alabama's natural resource endowment. Funding may come from combining private philanthropy, state funds, federal funds, and revenue from users of the infrastructure. Because projects will generate externalities and incremental

economic activity, projects will, over time, also generate a higher tax revenue for the state and contribute to their own funding.

We also propose a joint commission to ramp up infrastructure spending, select projects, and expand the supply of outdoor infrastructure. The joint commission would have three main charges: First, it would draw up and maintain a master plan for Alabama outdoor recreation to identify projects that would generate significant positive externalities, and then estimate the scale of the necessary investment. Second, the joint commission would be a vehicle through which funding sources, beyond those already in place, would be identified and pursued. Third, the joint commission would work with state agencies, municipalities, nonprofit organizations, and the private sector to plan outdoor recreation infrastructure projects, select developers, distribute funds, and ensure the delivery of projects and services.

NOTES

1 Florida, which is an outdoor recreation powerhouse, surveys tourists regarding their preferences. Sixty-one percent of tourists visiting the state responded that outdoor recreation is very important to them, while an additional 37 percent reported that it is somewhat important to them. See Vincent P. Magnini and Chuck Wyatt, *Florida Statewide Comprehensive Outdoor Recreation Plan Participation Study 2016–2017*, final report (Virginia Beach, VA: Institute for Service Research, n.d.), 34–35, available at https://floridadep.gov/sites/default/files/2016-2017-Participation-Study-w-tags.pdf.

2 "Outdoor Recreation," Outdoor Recreation Satellite Account, U.S. and States, 2019, US Bureau of Economic Analysis, November 10, 2020, https://www.bea.gov/data/special-topics/outdoor-recreation.

3 California has fifty-eight counties. Data refers to 2019 and is from the table "Unemployment Rate," US Bureau of Labor Statistics, Local Area Unemployment Statistics, and US Census Bureau, Small Area Income and Poverty Estimates (SAIPE) Program, retrieved July 28, 2021, from US Department of Agriculture, Economic Research Service, https://data.ers.usda.gov/reports.aspx?ID=17828.

4 "Coloma, CA," Data USA, accessed July 28, 2021, https://datausa.io/profile/geo/coloma-ca#about.

5 Data is from the National Land Cover Database 2016 (NLCD2016), a project conducted by the Multi-Resolution Land Characteristics Consortium (mrlc.gov). Tree canopy coverage is measured at a resolution of 30 m × 30 m using spectral satellite imagery supplemented by on-the-ground sources. Each cell is assigned a value from zero to 100 representing the percent canopy coverage for that area. In this map, "forested" is defined as 90 percent canopy coverage or greater and is shaded in green, with everything less than 90 percent unshaded. This cutoff was chosen to highlight regions of dense, uninterrupted forest and avoid the inclusion of suburban areas. We constructed alternate maps using thresholds of 66 percent and 75 percent, and the results were qualitatively the same (these maps have been omitted for brevity).

6 Features in the National Hydrography Dataset represent the spatial extent of bodies of water, allowing for surface area calculations. Areas shaded in blue were included in the surface area calculation and include rivers, streams, lakes, ponds, canals, weirs, dams, flumes, inundation areas, levees, spillways, and washes. The features displayed on the map have been drawn with a slight outline in order to improve visibility.

7 "Portage and Checkpoint Locations for the Great Alabama 650 Race," *Alabama 2020 650 Guidebook*, September 3 version, accessed July 15, 2021, https://www.alabamascenicrivertrail.com/uploadedFiles/Alabama_2020_650_Guidebook_September_3_version.pdf.

8 Patrick E. O'Neil, "River Systems and Watersheds of Alabama," *Encyclopedia of Alabama*, published August 7, 2008, last updated July 1, 2013, http://encyclopediaofalabama.org/article/h-1627.

9 South Central Alabama Development Commission, *Alabama Statewide Comprehensive Outdoor Recreation Plan, 2013–2018* (2014), 89, https://www.recpro.org/assets/Library/SCORPs/al_scorp_2013.pdf.

10 South Central Alabama Development Commission, *Alabama Statewide Comprehensive Outdoor Recreation Plan*, 89.

11 US Department of Commerce, Bureau of Economic Analysis, "2019 Florida Outdoor Recreation Satellite Account," accessed August 9, 2021, https://apps.bea.gov/data/special-topics/orsa/summary-sheets/ORSA%20-%20Florida.pdf.

12 US Department of Commerce, Bureau of Economic Analysis, "2019 Alabama Outdoor Recreation Satellite Account," accessed August 9, 2021, https://apps.bea.gov/data/special-topics/orsa/summary-sheets/ORSA%20-%20Alabama.pdf.

13 US Department of Commerce, Bureau of Economic Analysis, "2019 Georgia Outdoor Recreation Satellite Account," https://apps.bea.gov/data/special-topics/orsa/summary-sheets/ORSA%20-%20Georgia.pdf; "2019 Tennessee Outdoor Recreation Satellite Account," https://apps.bea.gov/data/special-topics/orsa/summary-sheets/ORSA%20-%20Tennessee.pdf; "2019 Mississippi Outdoor Recreation Satellite Account," https://apps.bea.gov/data/special-topics/orsa/summary-sheets/ORSA%20-%20Mississippi.pdf. All pages accessed August 9, 2021.

14 Scott L. Douglass, "Alabama's Coastline," *Encyclopedia of Alabama*, published March 2, 2009, last updated December 18, 2012, http://encyclopediaofalabama.org/article/h-2049.

15 The data from the Gap Analysis Project is available for download at https://www.usgs.gov/core-science-systems/science-analytics-and-synthesis/gap/science/pad-us-data-download?qt-science_center_objects=0#qt-science_center_objects.

16 The AllTrails web pages were accessed August 9, 2021: "Best Trails in Alabama," https://www.alltrails.com/us/alabama; "Best Trails in Georgia," https://www.alltrails.com/us/georgia; "Best Trails in Tennessee," https://www.alltrails.com/us/Tennessee; "Best Trails in Florida," https://www.alltrails.com/us/Florida; "Best Trails in Mississippi," https://www.alltrails.com/us/mississippi.

17 US Department of Transportation, Federal Highway Administration, *2019 Recreational Trails Program Annual Report*, accessed August 9, 2021, https://www.fhwa.dot.gov/environment/recreational_trails/overview/report/2019/report2019.pdf. *Note*: Recreational Trails Program funds for FY 2020 were the same as the previous year (FY 2019) under the FAST Act; US Department of the Interior, "The Land and Water Conservation Fund FY 2020 Regular Apportionment," March 31, 2020.

18 In Georgia the counterpart to ADCNR is the Department of Natural Resources. In Tennessee it is the Wildlife Resources Agency and the Department of Environment and Conservation. In Florida it is the Department of Environmental Protection and the Fish and Wildlife Conservation Commission. In Mississippi it is the Department of Wildlife, Fisheries, and Parks and the Mississippi Department of Marine Resources. Data is from State of Alabama, *Executive Budget, Fiscal Year 2021*, C-12, accessed August 9, 2021, https://budget.alabama.gov/wp-content/uploads/2020/02/FINAL-State-of-Alabama-Budget-Document-FY21.pdf; Georgia Governor's Office of Planning and Budget, HB 80-AFY 2021 Appropriations Bill, 69, dated February 11, 2021, https://opb.georgia.gov/budget-information/budget-documents/appropriations-bills; State of Tennessee, Department of Finance and Administration, *The Budget, Fiscal Year 2020–2021*, B-293, submitted February 3, 2020, https://www.tn.gov/content/dam/tn/finance/budget/documents/2021BudgetDocumentVol1.pdf; Florida Senate, SB 2500 (appropriations for FY 2021), 268, 281, accessed August 9, 2021, https://flsenate.gov/Session/Bill/2021/2500/BillText/er/PDF; Mississippi Legislative Budget Office: Statement VI: Total State Budget Recommend for Fiscal Year 2021, accessed August 9, 2021, http://www.lbo.ms.gov/PublicReports/GetBudgetRequestDetailReport/0?report=Statement6&fiscalYear=2021.

19 Alabama Department of Conservation and Natural Resources, *2019–2020 Annual Report*, 7, accessed August 9, 2021, https://www.outdooralabama.com/sites/default/files/pictures/2019-2020%20Annual%20Report.pdf.

20 In FY 2021, $138.3 million of the budgeted federal funding came from the RESTORE Act. As a consequence of the 2010 Deepwater Horizon oil spill, the act established the Gulf Coast Restoration Trust Fund in the US Treasury Department. Eighty percent of all administrative and civil penalties paid in connection with the Deepwater Horizon oil spill are deposited into the trust fund and invested. The returns fund programs, projects, and activities that restore and protect the environment and economy of the Gulf Coast region; see https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/restore-act. Funds are disbursed for specific projects. One should note that budgeted disbursements for FY 2021 exceed actual funding from the RESTORE Act in FY 2019 ($195,250) and FY 2020 ($11,793,012). See, respectively, Alabama Department of Conservation and Natural Resources, *2019–2020 Annual Report*, 7, and *2018–2019 Annual Report*, 7.

21 Under the Gulf of Mexico Energy Security Act (GOMESA) of 2006, Alabama, Louisiana, Mississippi, and Texas receive a portion of the revenue generated from oil and gas production offshore in the Gulf of Mexico. Most goes to the state through ADCNR, but some is allocated directly to Baldwin and Mobile Counties. See US Department of the Interior, "Natural Resources Revenue Data," accessed August 9, 2021, https://revenuedata.doi.gov/how-revenue-works/gomesa/#Revenue-sharing.

22 For information about the legal process to evaluate the damage from oil spills, see US Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service, "What Is a Natural Resource Damage Assessment?," accessed August 9, 2021, https://oceanservice.noaa.gov/facts/nrda.html.

23 State of Alabama, Forever Wild Land Trust, *Annual Report, Fiscal Year 2019–2020*, submitted January 29, 2021, https://www.alabamaforeverwild.com/sites/default/files/Forever%20Wild%20Land%20Trust%20Annual%20Report%20–%20FY20.pdf.

24 Forever Wild lands are managed by the Alabama Department of Conservation and Natural Resources (ADCNR) but are listed separately from the state government category to highlight the scale of Forever Wild Land Trust acquisitions.

25 FWLT revenue from State of Alabama, Forever Wild Land Trust, *Annual Report, Fiscal Year 2019–2020*.

26 State of Alabama, Forever Wild Land Trust, *Annual Report, Fiscal Year 2019–2020*.

27 Elliott Mest, "Gulf State Park Hotel Taps into Disaster Funding for Sustainable Development," *Hotel Management*, February 20, 2019, https://www.hotelmanagement.net/development/gulf-state-park-hotel-taps-into-disaster-funding-for-sustainable-development.

28 "Gulf State Park Master Plan and Implementation," Sasaki, accessed August 9, 2021, https://www.sasaki.com/projects/gulf-state-park-master-plan.

29 "Featured Trail System Projects," Freshwater Land Trust, accessed August 9, 2021, https://freshwaterlandtrust.org/what-we-do/about-red-rock-trail-system/featured-trail-projects.

30 "Red Rock Trail System," Freshwater Land Trust, accessed July 30, 2021, https://freshwaterlandtrust.org/what-we-do/about-red-rock-trail-system.

31 Freshwater Land Trust, *The Red Rock Ridge and Valley Trail System Master Plan* (2010), 1.4, https://freshwaterlandtrust.org/core/uploads/2018/01/Old-Website-Full-Red-Rock-Plan.pdf.

32 Additional funding came from the City of Birmingham, which contributed $2 million from a federal grant for drainage, streetscape, and infrastructure improvements, as well as contributions from numerous private, community, and corporate foundations, the Freshwater Land Trust, the Jefferson County Department of Health, the University of Alabama at Birmingham, and the Alabama Department of Transportation.

33 See, for example, the following articles in the *Birmingham Business Journal*: Brent Godwin, "New Back Forty Brewery Continues Activity along Jones Valley Trail," July 12, 2018, https://www.bizjournals.com/birmingham/news/2018/07/12/new-back-forty-brewery-continues-activity-along.html; and Ty West and Hanno van der Bijl, "Five-Story Apartment Project near Rotary Trail Moves Forward," October 6, 2020, https://www.bizjournals.com/birmingham/news/2020/10/06/indianapolis-developer-plans-new-apartment-project.html. See also these articles by Hanno van der Bijl: "Prominent Property on Rotary Trail Sold for $1.365M," August 11, 2020, https://www.bizjournals.com/birmingham/news/2020/08/11/city-trail-view-acquires-brad-morton-studio.html; "Local Developer Bringing Micro-unit Housing to Rotary Trail," January 22, 2020, https://www.bizjournals.com/birmingham/news/2020/01/22/local-developer-bringing-micro-unit-housing-to.html; "Metropolitan Secures Financing, Breaks Ground on 2323 Condo Project in Southside," May 13, 2021, https://www.bizjournals.com/birmingham/news/2021/05/13/metropolitan-secures-financing-breaks-ground-2323.html; "New Office Development Planned along Rotary Trail," January 19, 2021, updated January 20, 2021, https://www.bizjournals.com/birmingham/news/2021/01/19/new-office-development-planned-along-rotary-trail.html; and "Bayer Properties Forging Ahead with Project on Rotary Trail," November 19, 2020, https://www.bizjournals.com/birmingham/news/2020/11/19/what-s-the-latest-with-bayer-s-hardwick-project.html.

34 Freshwater Land Trust, *Red Rock Ridge and Valley Trail System*, 1.4.

35 See Montgomery Whitewater Project, accessed August 1, 2021, http://www.montgomerywhitewaterproject.com; "Officials Break Ground on Whitewater Park, Entertainment District in Montgomery," *Alabama NewsCenter*, June 11, 2021, https://www.alabamanewscenter.com/2021/06/11/officials-break-ground-on-whitewater-park-entertainment-district-in-montgomery; William Thornton, "Work to Begin on 120-Acre, $50 Million Montgomery Whitewater Park," AL.com, June 11, 2021, https://www.al.com/business/2021/06/work-to-begin-on-120-acre-50-million-montgomery-whitewater-park.html; Brad Harper, "Wave of Enthusiasm Builds as $50 Million Whitewater Park Breaks Ground in Montgomery," *Montgomery Advertiser*, June 10, 2021, https://www.montgomeryadvertiser.com/story/news/2021/06/10/construction-starts-50-million-montgomery-whitewater-park/7620796002.

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39 "Meet the Team," University of Alabama Center for Economic Development, accessed August 2, 2021, https://www.uaced.ua.edu/staff.html.

40 Freshwater Land Trust, *Red Rock Ridge and Valley Trail System*, 1.4.

41 The Alabama Trails Commission (ATC) was established by Legislative Act 2010-585 (HB 376) with twelve commissioners and seventeen advisory board members. Its mission is to promote, develop, and facilitate a statewide trail system utilizing intergovernmental coordination, advocacy, education, and alternative funding sources. The ATC is staffed by the UACED. See "Alabama Trails Commission," University of Alabama Center for Economic Development, accessed August 6, 2021, https://www.uaced.ua.edu/alabama-trails-commission.html.

About the Authors

Alexander Galetovic is a research fellow at the Hoover Institution and a senior fellow at Universidad Adolfo Ibáñez, Santiago, Chile. His current research focuses on three fields: institutional design for the efficient provision of infrastructure; the design of efficient capacity and reserve markets in electricity; and the role of patents and Ricardian rents in fostering innovation.

Stephen Haber is the Peter and Helen Bing Senior Fellow at the Hoover Institution and the A.A. and Jeanne Welch Milligan Professor in the School of Humanities and Sciences at Stanford University. He is also a professor of political science, history, and economics (by courtesy), as well as a senior fellow of both the Stanford Institute for Economic Policy Research and the Stanford Center for International Development.

Jordan Horrillo is a PhD candidate in comparative politics at Stanford University. He specializes in geospatial analysis and data visualization, and his research focuses on the role of climate and geography in the historical development of political institutions. Horrillo received his BA in economics from California Polytechnic State University, San Luis Obispo, in 2015.

Isabel Lopez is a senior program manager at the Hoover Institution. She holds a BA in global affairs and world history from Stanford University, where she graduated with honors and distinction.