The Economic & Community Benefits of Tribes in Washington

Jonathan B. Taylor
2019
Each of the 29 federally recognized tribes in Washington State is governed by a body of elected officials.

Tribal governments treat the sick, educate children, house families, protect the public, administer justice, transport workers, manage natural resources, vitalize culture, build infrastructure, & develop economies.

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Tribal governments in Washington are investing in their people, infrastructure, land, and communities to an extent unprecedented in the past and unmatched by other governments in the state. The resulting economic growth yields substantial benefits for all Washingtonians. This independent economic analysis shows tribal governments to be among the top employers in the state, fiscally strong, and net contributors to the economy and treasury.

**Findings in Brief**

**Jobs**
In 2017, Washington tribes directly employed more than 30,715 Washingtonians, ranking above Safeway & Albertsons (8th) and Walmart (9th).

In 2017, Tribal governments paid more than $1.5 billion in employee compensation, inclusive of benefits and employer-paid payroll taxes.

At least 55,661 total jobs in Washington are traceable to the economic activity of tribal governments through direct, indirect and induced impacts.

**Growth**
Tribes are diversifying into golf courses, hotels, convenience stores, conference centers, entertainment venues, and other businesses.

In 2017, tribal governments invested more than $374 million in construction of hotels, community centers, travel plazas, roads, clinics, and more. Tribal governments are also investing in health care, education, housing, and the natural environment.

Average Indian income on Washington's reservations grew by 30 percent from 1990 to 2017.

This growth—and all that springs from it—arises from tribes' status as sovereigns under US federalism. Four out of five dollars of tribal government revenue are derived from tribal sovereignty—either resource sales, taxes, or tribally owned business income.

**Benefits to non-Indians**
Non-Indians constituted 70% of Washington tribes' workforces, and tribes purchased more than $3 billion in goods and services, virtually all of it (94%+) from the off-reservation economy.

The combined direct, indirect, and induced effects of recurring tribal economic activity yielded more than $5.3 billion in gross state product, which produced an estimated $722 million in state and local government revenue.

In addition to the recurring payroll and purchasing, the tribes spent $456 million on non-recurring capital expenditures in 2017, to bring the total impact to $5.7 billion in gross state product.

Non-Indian communities also benefit from spillovers produced by the tribes' investments in social, environmental, and human capital in the state.

At least 55,661 jobs in Washington are traceable to the economic activity of tribal governments.
Indian tribes in the state of Washington have experienced rapid change in recent decades. To take just one headline statistic, Indian income on Washington’s reservations grew by 30 percent from 1990 to 2017.¹

This growth—and all that springs from it—arises from tribes’ status as sovereigns under US federalism. The US Constitution, federal legislation and regulation, judicial precedents, and Washington State laws recognize tribes' inherent and retained powers of self-government. Prior to what is widely referred to as the Self-Determination Era, federal and state governments proved themselves unwilling or incapable of addressing Indian social and economic challenges. Privatization of Indian land under the Dawes Act did not work. Disbanding tribes in the Termination Era did not work. And Great Society anti-poverty programs were not designed, sustained, or funded adequately. Contemporary strengthening of Indian communities' capacities to govern themselves—powers long under assault or neglect—explain the resurgence of tribal economies [3]. Tribal sovereignty is not just the law, it is a good idea.

As they themselves emphasize, tribes are "enriching people, sustaining the environment and natural resources, preserving culture, and building community." [4]

These phrases describe restoring and growing capital—assets capable of generating future value. This capital takes obvious physical form as schools, museums, roads, sawmills, farms, and other structures. It also takes less visible forms as human, environmental, and cultural capital.

### Milestones of Tribe-State Relations in Washington

<table>
<thead>
<tr>
<th>Period</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1828–1887</td>
<td>Removal, Reservation, and Treaty Era</td>
</tr>
<tr>
<td>1854–1856</td>
<td>Indian Treaties with the United States</td>
</tr>
<tr>
<td></td>
<td>Point Elliot, Medicine Creek, Point No Point, Neah Bay, Yakama, Quinault, &amp; Walla Walla</td>
</tr>
<tr>
<td>1887</td>
<td>Dawes Act</td>
</tr>
<tr>
<td></td>
<td>allotted Indian reservations, precipitating additional land loss</td>
</tr>
<tr>
<td>1889</td>
<td>Washington Statehood</td>
</tr>
<tr>
<td></td>
<td>the 42nd state joined the Union</td>
</tr>
</tbody>
</table>

## Tribal Economies are Growing

![Income Per Person](chart)

<table>
<thead>
<tr>
<th>Year</th>
<th>Income Per Person (2019 dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>$12,582</td>
</tr>
<tr>
<td>2000</td>
<td>$16,403</td>
</tr>
<tr>
<td>2010</td>
<td>$16,403</td>
</tr>
<tr>
<td>2020</td>
<td>$16,403</td>
</tr>
</tbody>
</table>

1. Information from [Taylor 2019](#)
**“Nisqually Tribe has grown so much in the last 15 years. The casino has given us the opportunity to move forward with facilities like a new administration building and the community center, and to pursue new opportunities in housing, health care, education, and employment. We’re putting our tribal members and community members to work.”**

Willie Frank III | Council Member, Nisqually Tribe

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### Economic & Community Benefit of Tribes

<table>
<thead>
<tr>
<th>Era</th>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reorganization Era</strong></td>
<td>1934-1953</td>
<td>Strengthened tribal governments and Indian control over assets</td>
</tr>
<tr>
<td><strong>Termination Era</strong></td>
<td>1953-1968</td>
<td>Indian Reorganization Act encouraged tribes to take over program administration on the reservations</td>
</tr>
<tr>
<td><strong>Self-Determination Era</strong></td>
<td>1968-2020</td>
<td>Tribal Self-Governance Act applied self-governance contracting permanently &amp; broadly to the Dept. of Interior</td>
</tr>
<tr>
<td><strong>Boldt Decision</strong></td>
<td>1974</td>
<td>Reaffirmed treaty-reserved rights to harvest and co-manage salmon</td>
</tr>
<tr>
<td><strong>California v. Cabazon</strong></td>
<td>1987</td>
<td>Upheld Indian gambling</td>
</tr>
<tr>
<td><strong>Indian Self-Determination and Educational Assistance Act</strong></td>
<td>1975</td>
<td>Promoted tribal economic development and self-governance via gaming; created tribal-state compacts</td>
</tr>
<tr>
<td><strong>Centennial Accord</strong></td>
<td>1989</td>
<td>Committed Washington &amp; tribes to Gov’t-to-Gov’t collaboration</td>
</tr>
<tr>
<td><strong>Tribal Self-Governance Act</strong></td>
<td>1994</td>
<td>Applied self-governance contracting permanently &amp; broadly to the Dept. of Interior</td>
</tr>
<tr>
<td><strong>Friendly Lawsuit</strong></td>
<td>1997</td>
<td>Resolved a gaming impasse amicably</td>
</tr>
<tr>
<td><strong>Gov’t-to-Gov’t Law</strong></td>
<td>1999</td>
<td>Codified collaboration</td>
</tr>
<tr>
<td><strong>Millennial Agreement</strong></td>
<td>2000</td>
<td>Reaffirmed the Centennial Accord</td>
</tr>
<tr>
<td><strong>Tribal gaming compacts with Washington</strong></td>
<td>2012</td>
<td>Tribal gaming compacts with Washington</td>
</tr>
</tbody>
</table>

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Economic & Community Benefit of Tribes 5
**Tribes are Investing**

**PHYSICAL CAPITAL:** the buildings and infrastructure that facilitate commerce, meet community needs, and house families.

In 2017, tribal governments invested more than $374 million in the construction of hotels, community centers, travel plazas, roads, clinics, and more, including a Elders Assisted Living Center at Puyallup, a casino remodel at Shoalwater Bay, utilities construction at Skokomish, office renovations at Samish, and a wide range of other new construction and rehab projects.

This investment requires workers and materials from Washington’s economy during construction. More importantly over the long-term, Indians and non-Indians alike will benefit from the use of this physical capital as workers, commuters, shoppers, students, patients, residents, and citizens.

**HUMAN CAPITAL:** the skills, knowledge, and health that expand people’s capacity to contribute to their communities.

Tribes operate Head Start programs, day-care centers, schools, libraries, after-school centers, and tribal colleges. Tribe-sponsored college and graduate school scholarships provide pathways to higher-education and careers.

On the job, tribal employees routinely access training, employee assistance, and other programs that help their careers. Across the state, tribes are investing in health and dental clinics, counseling and wellness programs, rehab centers, fitness centers, and other mechanisms for returning people to vigorous participation in community life.

Successful human capital investment in poor communities yields double dividends. One, it helps reduce dependency—on family, tribe, or taxpayers—and two, it increases lifetime productivity. Such investments regularly encompass the tribes’ non-Indian neighbors.
ENVIRONMENTAL CAPITAL: the soil, water, flora, and fauna that provide ecosystem services like clean drinking water, robust food chains, fertile soil, and outdoor recreation.

Tribal governments operate hatcheries, manage timber, monitor pollutants, and care for the land.

The Jamestown S’Klallam Tribe invested with dozens of partners to reverse a century's-worth of channel straightening, wetland filling, and other degradation to Jimmycomelately Creek. The work saved a salmon run. Similar tribal collaboration and investment spans dam removal on the Elwha River, restoration of the Nisqually and Skokomish estuaries, riparian planting on the Skagit River, and relocating beaver families within the Snohomish watershed.

As is characteristic of environmental public goods, this culturally rooted tribal stewardship of the land has spillover benefits for Washingtonians generally.

CULTURAL CAPITAL: the shared identity and values that increase trust and cooperation, support institutions, and strengthen communities.

The Colville Tribes’ Waterfalls language immersion program, the multinational canoe journey, the Suquamish Museum, and countless similar tribal investments revitalize Native cultures.

Native cultural invigoration helps restore Indian communities damaged by the boarding school experience, land loss, federal mismanagement, and other assaults. It also enhances the state’s identity as the home of the Seahawks and numerous Indian tourist attractions. Tribal cultural investments are characterized by openness to the general public—like the canoe journey and Kalispel’s Camas Center for Community Wellness in Usk—and are accompanied by substantial giving off the reservations—$4.24 million in Community Impact Funds Distributions and $9.9 million in Charitable Distributions [5].
When tribes address policy challenges like overcrowded housing, they employ workers (often in rural areas); they purchase materials and services; and most importantly, they attend to long-standing deficits that separate Indians from full participation in the Washington economy.

Tribal investments in physical, human, natural, and social capital have helped Indian communities recover from long-lasting privation, yet much still needs to be done. Washington Indians, generally, and residing on reservations, in particular, experience social and economic challenges more than most Washingtonians. And the statewide data masks variation among tribes. Remote rural Native nations have not had the access to markets necessary to employ and support their often-larger populations. Nevertheless, when change happens (as in the greater income growth rate), the Washington economy grows as underutilized resources—especially people (see labor force participation in the table)—engage more fully in the formal economy.

### Relative Standing of Indians in Washington State
2011-2015

<table>
<thead>
<tr>
<th></th>
<th>Indians on reservations</th>
<th>all people statewide</th>
</tr>
</thead>
<tbody>
<tr>
<td>bachelor’s degree or higher</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>median household income</td>
<td>n/a</td>
<td>$40,216</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$61,062</td>
</tr>
<tr>
<td>labor force participation rate</td>
<td>50%</td>
<td>56%</td>
</tr>
<tr>
<td>child poverty</td>
<td>36%</td>
<td>32%</td>
</tr>
<tr>
<td>overcrowded homes</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3%</td>
</tr>
</tbody>
</table>

When tribes address policy challenges like overcrowded housing, they employ workers (often in rural areas); they purchase materials and services; and most importantly, they attend to long-standing deficits that separate Indians from full participation in the Washington economy.
Tribal governments across Washington are investing hundreds of millions of dollars to create jobs and business opportunities.

W. Ron Allen | Chairman, Jamestown S’Klallam Tribe
Tribes are Economically Consequential

There are 29 federally recognized Indian Tribes in Washington. Twenty-four of them participated in a WIGA-administered survey about their governmental, gaming, and non-gaming business activity in 2017 [6]. Collectively they submitted data about 157 enterprises operating in 2017, 26 of which were casinos. The non-gaming businesses span a seasonal firework stand, a linen service, convenience stores, a waterpark/hotel/conference center, and more. Their diversity strengthens tribal economies.

The respondent tribes’ casinos represent 96 percent of the Indian gaming capacity in the state [7], but as comprehensive as it is, the survey does not fully characterize the Indian economy. In addition to missing the economic activity of the five tribes that did not participate, it omits businesses owned by individual Indians and by non-Indians, both of which can benefit from tribal zoning, leasing, infrastructure, and other public policies. What follows is thus an understatement.

The responding tribes employed 29,285 Washingtonians in 2017. Overall, seven in ten tribal employees are non-Indians, with the proportion highest in casinos. Casino and enterprise employment dominates these statistics with more than two-thirds of the total. Years ago, reservation economies were dominated by tribal government employment, much of which was supported by federal funds. Publicly available data on casino employment adds 1,430 jobs to that total (i.e., filling in for tribes that did not participate in the survey, or did not report casino employment), albeit without information about Indian and non-Indian shares [7]. Unfortunately,

### Washington Tribes’ Non-Indian & Indian Employment

<table>
<thead>
<tr>
<th></th>
<th>Indian</th>
<th>non-Indian</th>
<th>total</th>
<th>% non-Indian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casino</td>
<td>2,371</td>
<td>14,642</td>
<td>17,012</td>
<td>86%</td>
</tr>
<tr>
<td>Enterprise</td>
<td>1,190</td>
<td>1,860</td>
<td>3,050</td>
<td>61%</td>
</tr>
<tr>
<td>Government</td>
<td>5,283</td>
<td>3,939</td>
<td>9,222</td>
<td>43%</td>
</tr>
<tr>
<td>total:</td>
<td>8,844</td>
<td>20,441</td>
<td>29,285</td>
<td>70%</td>
</tr>
</tbody>
</table>

[6]

[7]
Top 15 Employers in Washington
in-state employees, 2018

#1 65,829 Boeing
2 54,000 Joint Base Lewis-McChord
3 50,000 Amazon.com
4 46,293 Microsoft
5 45,945 Navy Region Northwest
6 44,955 University of Washington Seattle
7 43,067 Providence St. Joseph Health
30,715 Washington Tribes*
8 21,541 Safeway & Albertsons
9 19,957 Walmart
10 17,601 Costco Wholesale
11 16,302 MultiCare Health System
12 15,539 Fred Meyer Stores
13 15,449 King County Government
14 13,954 Starbucks
15 13,317 Swedish Medical Center First Hill/Ballard

*Survey data and additional public information, 2017.
[6,7,8]

In 2017, the respondent tribes paid more than $1.5 billion in employee compensation, inclusive of benefits and employer-paid payroll taxes. In that same year, those tribes purchased more than $3 billion in goods and services. In addition to the recurring payroll and purchasing, the responding tribes spent $456 million on non-recurring capital expenditures in 2017. These include the new Marriott Fairfield Hotel at Chehalis, the new Legends Hotel at Yakama, the Didgwalic Wellness Center at Swinomish, and Marine View Ventures’ multi-year wetland restoration project at Puyallup. While year-to-year and tribe-to-tribe variations in capital expenditures can be large, Washington’s economy repeatedly benefits from these expenditures.3
Indian Country in Washington

*As reported by survey respondents. Not shown: on-reservation businesses owned by individual Indians or non-Indians.

[1,6,7]
Tribes are More Fiscally Independent

The tribes’ fiscal independence is evident in tribal government budgets. Only one in five tribal government dollars comes from a transfer: 17% federal and 3% state (much of the latter may be a pass-through of federal funding, e.g., for highways). Four out of five dollars of tribal government revenue are derived from tribal sovereignty—either resource sales, taxes, or tribally owned business income. This is a welcome increase since 2005 when only two-thirds of tribal revenue was from these sources [9].

While tribal governments are more fiscally independent than they have been, they remain economically interdependent with the off-reservation economy. Reservation economies are small relative to the wide range of goods and services they require—electricity, poker chips, police cruisers, asphalt, accounting services, food, chainsaws, and more—consequently, tribes turn to the off-reservation economy for the vast preponderance of their inputs (94%, if not more) [9].

The foregoing discussion masks a great deal of variation across tribes, reservations, and businesses. The variation results mostly from the settlement patterns of the state and results in some reservations that are enormous but remote (see Colville, Yakama, and Quinault) and some reservations in proximity to large numbers of Washingtonians (e.g., Muckleshoot, Puyallup, and Tulalip). To address this variation in economic geography, the intergovernmental compacts with Washington (to define and regulate Class III—Las Vegas-style—gaming activity) permit tribes to lease a portion of an allocation of about 1,125 gaming machines to other tribes. This enables tribes with limited market opportunity to benefit from other tribes’ greater opportunities.

Variation in depth and breadth of participation in WIGA’s survey complicates the assessment of change since 2010—the most recent prior survey. Mere juxtaposition of total surveyed employment in 2010 to 2017 would make an apples-to-oranges comparison; some tribes or enterprises may be present in one of the surveys but not the other.4 Data on gross receipts from the State Gambling Commission indicate that inflation-adjusted gaming revenues grew by 28 percent in that period [2,10]. The all-tribes, all-enterprises statistic may be similar, but regardless of the precise number, growth is welcome. Reservations have needed healthy economic growth for decades. Now they have it.

Makah is located at the far northwest tip of the state. We don’t operate a casino. We lease our rights to video lottery terminals to tribes in urban areas. We use gaming revenue to support government programs—education, health care, public safety, housing, road maintenance—and we also make investments to create jobs and support business growth.

Nate Tyler | Chairman, Makah Tribe
Tribes Have Substantial Impact

Reservation economic activity spills immediately off the reservation—the direct effect. For example, replacing the carpeting at a tribal casino or health clinic registers in the Washington economy as demand for installers, trucking, and carpeting. The firms that supply the tribes, in turn, buy gasoline, truck parts, carpet thread, and other inputs—the indirect impact. As tribes and their input suppliers issue payroll to households, those in turn buy food, clothing, auto repairs, natural gas, and so on—the induced effect. At each iteration, some demand registers outside the region (imports), some cash is held back from the economy (savings), and some money pays for government (federal, state, and local taxes). In total, the value added at each stage adds up to the gross regional product.

### Tribes’ Impacts on the Washington Economy

<table>
<thead>
<tr>
<th></th>
<th>jobs</th>
<th>labor income</th>
<th>taxes*</th>
<th>value added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annually Recurring</td>
<td>55,661</td>
<td>$2,823</td>
<td>$806</td>
<td>$5,329</td>
</tr>
<tr>
<td>2017 Construction</td>
<td>3,988</td>
<td>$215</td>
<td>$26</td>
<td>$342</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>59,649</strong></td>
<td><strong>$3,038</strong></td>
<td><strong>$833</strong></td>
<td><strong>$5,670</strong></td>
</tr>
</tbody>
</table>

*Federal, state, & local taxes on production and imports, i.e., does not include social insurance or income taxes.
[6,11]
The data from the tribes permits evaluation of their total economic impact with IMPLAN—a routinely used input-output model originally created by the US Forest Service for such estimation [11]. Working from tribal revenue and payroll data, IMPLAN estimates that at least 55,661 jobs in Washington are traceable to the economic activity of tribal governments. The combined direct, indirect, and induced effects of recurring tribal economic activity yield more than $5.3 billion in gross state product, which produces an estimated $722 million in state and local government revenue plus $84 million in federal taxes on production and imports. One-time construction and rehab expenditures in 2017 add an additional $342 million to bring the total impact to $5.7 billion in gross state product. Again, these numbers understate the effect because the survey responses are not exhaustive and do not encompass individual Indian and non-Indian businesses that benefit from tribal policy. The appendix explains additional reasons these estimates are conservative.
Several attributes of the Indian economy mean that it produces net economic benefits for Washington. First, the tribes’ enterprises are locally owned. Their income does not dissipate to wherever in the global capital markets shareholders might reside. Instead, tribal profits are spent by in-state governments on everything from school books to brick-and-mortar clinics, community centers, and police stations. Tribes cannot and will not threaten to take their operations elsewhere to obtain abatements of taxes or to lower employment costs.

Second, growth in economically distressed areas makes better use of underutilized resources—especially labor—and American Indian reservations have historically been some of the poorest places in Washington. Thus, robust reservation economies are not just good for Indians, but also bring more land, buildings, people, and resources into participation in the Washington economy.

Third, tribes take seriously their obligations under the compacts to address problem gambling. Under amendments to the gaming compacts, tribes agree to allocate 0.13% of top-line revenues from Class III gaming “to problem gambling education, awareness, and treatment” via “governmental, charitable and/or non-profit organizations, which may include the Department of Social and Health Services’ Division of Alcohol and Substance Abuse... that are directly related to helping to reduce problem gambling” [12]. In 2015, such distributions totaled $2.6 million [5]. These efforts, combined with tribal reimbursement of Washington gaming regulation under the compact, work to minimize the potential that tribal gaming development imposes fiscal or other burdens on Washington.
Fourth, economic growth on the reservations does not come at the expense of economic development elsewhere. Some have asserted that casinos siphon money out of the state-taxable economy [13]. The claim lacks empirical foundation, and contradicts systematic evidence showing casino introductions to be associated with positive economic consequences [15-21].

Observing that the world economy grows with international trade or that the national economy grows with interstate commerce provokes no controversy. So it is with states. Washington's economy grows as American Indian economic development increases commerce between tribes and Washington's workers and businesses.

**ROBUST RESERVATION ECONOMIES** are not just good for Indians, but also bring more land, buildings, people, and resources into participation in the Washington economy.
Care in reporting accompanies conservatism in modeling. Many impact studies report output numbers instead of value added, but output double-counts (and worse). For example, the original value of iron that becomes ore at a mine, steel at a smelter, stamped sheet metal at a mill, a radio housing at an electronics firm, a car stereo at an auto plant, and a car sale at a dealership would be counted six times over in output. Yes, each firm received revenue to cover the costs of its inputs—in turn, the revenues of its input suppliers—but the economy is not as large as all those firms’ revenues. Because it is not appropriate to count the iron ore six times, economists measure gross regional, state, or national product—the sum of all value added—to track growth and recession—not the measure of all firms’ revenues (output). Not only is value added exaggerated by double-counting, it does not vary with vertical integration or segmentation. By contrast output would shrink in the iron ore example above if the smelter and sheet metal firms merged, despite the economy not shrinking by such a merger.

Notes
1 In large economies like the nation’s and Washington’s, personal income is the lion’s share of gross regional product. That is not quite the case for smaller economies—like tribes’—which can be idiosyncratically dominated by natural resource income or business proprietor income. Growth rate is calculated in inflation-adjusted terms.
2 Measured as gaming positions, the number of electronic gaming devices plus seven times the number of table games and poker tables.
3 This spending exceeds the $2.5 billion in Indian gaming revenues that the Washington State Gaming Commission (WSGC) reported in fiscal year 2017 because tribes’ non-gaming businesses also hire and buy and because tribal governments are also funded by tribal taxes, real estate leasing, stampage, and grants.
4 In addition, the earlier study did not close the gap in participation with publicly available casino employment data for those tribes that did not provide it.
5 Indeed, to the contrary, a parsimonious statistical analysis of 268 Washington tax districts found no discernible change in taxable sales or taxable property upon the opening of an Indian casino nearby [14].

Appendix
Several modeling approaches improve the precision of the impact estimates and introduce conservatism. Tribal enterprise impacts were modeled to reflect their government-owned nature; top-line enterprise revenue (demand) was combined with a modeling assumption to zero out proprietor income. In contrast to run-of-the-mill IMPLAN studies, this approach eliminates the risk of overstating proprietor income (a segment of value added) when modeling a government-owned enterprise with its government. In addition, at the recommendation of the IMPLAN Group, top-line revenues in retail businesses were margined to eliminate the pass-through of the cost of goods sold (COGS).

Tribal government was modeled using a local government institutional spending pattern. In both government-owned enterprise and administrative government modeling, tribal survey responses on total compensation (i.e., inclusive of employer contributions to social insurance) were introduced to further calibrate the model to actual operations in 2017. When modeling capital expenditures that entailed real estate transactions, the purchase price was not the basis of demand change (since most of its value represents a wealth exchange that does not affect the demand for goods and services in the economy). Instead only an estimate of the transactions costs (6%) was imputed to the legal, real estate, and banking sectors.

References
1. US Census. Decennial Census and American Community Survey 5-Year Estimates. Washington, DC; various years (plotted by named year of publication).
The Washington Indian Gaming Association (WIGA) funded this study under a contract with the Taylor Policy Group, Inc. The views expressed in this document are those of the author and do not necessarily reflect those of the institutions with which he is affiliated. Unless otherwise indicated, WIGA or its member tribes provided the material herein.

The titles of tribal leaders are contemporary to the time of publication: early 2019. WIGA provided information and photographs not otherwise cited or credited.

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