

Tax Incentive Evaluation

Georgia's Sales Tax Exemption on Construction Services

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Tax Incentive Evaluation: Georgia's Sales Tax Exemption on Construction Services

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Executive Summary

This study is a review of Georgia's sales tax exemption on construction services conducted in accordance with the Tax Expenditures Transparency Act of 2024, also known as Senate Bill 366. Georgia's current sales tax provisions apply to "tangible personal property and certain services", but has never included construction services. Consequently, no clear-cut "taxed" v. "tax exempt" periods exist for direct comparison. The research team projected forgoneforgone state sales tax revenue attributable to the exemption and compared the estimated ROI of the current tax situation with the counterfactual scenario: what if Georgia collected sales taxes on construction services as defined by NAICS code 23.

NAICS code 23 includes a broad range of construction services including the construction of buildings or engineering projects (e.g., highways and utility systems). Services related to the preparation of sites for new construction, as well as subdividing land for sale as building sites are also included in this sector. Consequently, the analysis applies to all construction related services in the state. The research team found that very few states tax construction services at all, and that those who do tend to tax only a very limited number of narrowly defined services. In general, states that tax construction services tend to avoid taxing new construction and focus on taxing maintenance and remodeling activities .

The estimated ROI of Georgia's sales tax exemption on constructions services (Table A), ranges from 5.7% in 2024 to 9.9% in 2029. ROI grows by approximately 1% per year due to the increasing value added to the construction sector relative to the cost of construction services. Intuitively, this result implies that, for every \$1 in tax exempted in 2024, an additional \$1.06 is reinvested into construction output. The reverse case could also be assumed. That is, for every \$1 of tax collected on construction services under a counterfactual scenario, approximately \$1.06 would be subtracted from construction output in the state. The ROI of the exemption is calculated based on net forgone sales tax revenue, that is, the total or gross amount of forgone revenue to the state less any additional taxes collected as a result of the exemption.

In the case of the alternate use of forgone revenue, institute researchers modeled two impacts: the impact of the state of Georgia collecting and spending sales tax revenue from construction services and the impact of the reduction in construction output due to reduced demand for construction as the price of construction labor increases. Under the alternate scenario, for every \$1 in sales tax on construction services collected and spent by the state, \$1.37 in value-added impact accrues to the state's economy.

	2024	2025	2026	2027
Gross Forgone State Rev.	\$2,883,083,960	\$2,932,477,414	\$3,016,826,268	\$3,077,435,150
Net Forgone State Rev.	\$2,681,493,694	\$2,727,433,472	\$2,805,884,506	\$2,862,255,510
Exemption Value-Added	\$2,834,246,242	\$2,903,774,251	\$3,009,883,178	\$3,094,483,304
ROI of Exemption ¹	0.057	0.065	0.073	0.081
Alt. Use Value-Added	\$3,957,527,461	\$4,025,328,452	\$4,141,111,728	\$4,224,307,819
ROI of Alternate Use ²	0.373	0.373	0.373	0.373
	2028	2029		
Gross Forgone State Rev.	\$3,137,876,073	\$3,191,073,883		
Net Forgone State Rev.	\$2,918,470,298	\$2,967,948,424		
Exemption Value-Added	\$3,181,043,923	\$3,262,471,537		
ROI of Exemption ¹	0.090	0.099		
Alt. Use Value-Added	\$4,307,273,357	\$4,307,273,357		
ROI of Alternate Use ²	0.373	0.373		

Table A. ROI of Georgia's sales tax exemption on construction services and alternate use of forgone revenue, 2024-2029.

Source: Institute of Government Projections based on IBISWorld Data & IMPLAN 2022.

- 1. ROI of the tax exemption is calculated based on Net Forgone State Revenue (e.g. gross forgone revenue less additional state taxes collected).
- 2. ROI of the alternate use is calculated based on Gross Forgone State Revenue

Background

This study is a review of Georgia's sales tax exemption for construction services conducted in accordance with the Tax Expenditures Transparency Act of 2024, also known as Senate Bill 366. SB366, passed during the 2024 legislative session, expands on the requirements of its predecessor, SB6. SB6 required the calculation of forgone tax revenue, the economic impact of the tax incentive on the state economy, and the overall return on investment (ROI) of the credit or exemption. SB366 expands this list to include an assessment of the exemption's efficiency, ancillary impacts, the theoretical impact of modifying or terminating the exemption, and recommendations for improving the ROI. This report is one of three tax incentive evaluations produced under contract with the Georgia Department of Audits and Accounts by the University of Georgia's Carl Vinson Institute of Government.

HISTORY & PURPOSE

In the state of Georgia, construction services are implicitly exempt from state tax. In fact, almost all services are exempt from state sales tax with only a few specifically enumerated exceptions. There is no specified date or section of the Georgia code that is associated with this tax exemption. Consequently, there is also no stated or implied purpose of this sales tax exemption. It is assumed that services are tax exempt because they are analogous to labor, which is taxed through the state's income tax.

HOW IT WORKS

Traditionally, the state of Georgia determines eligibility for state sales tax based on the "purchase of tangible goods." Georgia State University's Fiscal Research Center publishes estimates of the tax expenditure for many services and has established that the inclusion of the consumption of services could produce a more thorough estimation of total tax expenditure in the state. Based on this precedent, institute researchers produced the following evaluation on the sales tax exemption for construction services.

Georgia does not explicitly identify any construction services as qualifying for taxation at the time of sale. In the absence of instructions on which specific construction services to consider in this evaluation, institute researchers followed guidance provided by the Department of Accounts and Audits, to mirror the annual Georgia Tax Expenditure Report, which bases construction services estimates on NAICS code 23, Construction.¹ NAICS code 23 includes: "erecting buildings and other structures (including additions); heavy construction other than

¹ Georgia Tax Expenditure Report for FY 2025, Fiscal Research Center at Georgia State University https://opb.georgia.gov/budget-information/budget-documents/tax-expenditure-reports

buildings; and alterations, reconstructions, installations, and maintenance and repairs" (p.16).² For a more expansive definition of NAICS code 23, see Appendix A.

UTILIZATION

Utilization of the sales tax exemption for construction services cannot be easily quantified as all construction service providers in Georgia have access to the exemption by default. The estimated value of the construction services industry in Georgia ranged from \$49.5 billion in 2014 to \$72.1 billion in 2024, with the largest value occurring in 2021 (Figure 1). These figures are adjusted to account for the exclusion of building materials, which are already taxed under Georgia law as tangible personal property. Implementing a blanket tax on all construction services would likely result in an extensive impact on Georgia's construction industry from both a cost and regulatory standpoint. If a sales tax for construction services was implemented, it would be advantageous to consider specific categories to be taxed, and their impact on the state economy. This topic is discussed further in the Other States section.



Figure 1. Estimated Value of the Construction Services Industry in Georgia, 2014-2024.

Source: Institute of Government calculation based on IBISWorld. Note - 2024 is an estimate based on partial data.

² North American Industry Classification System United States, 2022

https://www.census.gov/naics/reference_files_tools/2022_NAICS_Manual.pdf

OTHER STATES

Most states, including Georgia, collect sales tax only on purchases of tangible personal property and not on services. While institute researchers found no states that levy a blanket sales tax on all construction services, they did identify three notable examples of states that tax certain narrowly defined construction-related services: New York, Texas, and Washington. In New York, sales of services are generally tax exempt. The taxation of services to real property depends on classification. New York's statute indicates that sales tax is imposed on the service of installing, maintaining, servicing or repairing tangible personal property at a rate of 4.0% plus local option up to 4.88%, totaling 8.88%.³ In contrast, capital improvements are exempt from sales tax. New York provides an extensive list with examples to help distinguish between capital improvement or repair, maintenance, and installation services.⁴ When repair, installation, and maintenance services are rendered, the contractor must collect sales tax on the labor from the customer, unless exemption documentation is provided. Capital improvements are exempt from sales taxes as long as the customer provides the contractor with the proper Certificate of Capital Improvement.

In Texas, several services are taxable at the state's 6.25% rate with the local option up to 2.00%, totaling 8.25%.⁵ The distinction for taxation of services hinges on whether the serviceable property is residential or nonresidential and whether it is new construction or improvement on previous construction. Under Rule § 3.356 of the Texas Administrative Code, taxable real property services include pest control, garbage and waste collection or removal, janitorial and custodial services, landscaping, lawn care and maintenance, and surveying.⁶ Also, in Texas, any construction services related to nonresidential real property repair, restoration, or remodeling, or that focus on major changes to existing structures not used as a "family dwelling" are subject to taxation.⁷ Labor services categorized as repair, remodeling, or restoration of new residential real property (such as family dwellings, housing complexes, multifamily apartments, etc.) are not taxable.

³ Walczak, Jared, "State and Local Sales Tax Rates, 2024". Tax Foundation, February, 6, 2024. https://taxfoundation.org/data/all/state/2024-sales-taxes/

⁴ Publication 862 Sales and Use Tax Classifications of Capital Improvements and Repairs to Real Property https://www.tax.ny.gov/pdf/publications/sales/pub862.pdf

⁵ Texas Comptroller of Public Accounts. Sales and Use Tax.

https://comptroller.texas.gov/taxes/sales/#:~:text=Texas%20imposes%20a%206.25%20percent,as%20well% 20as%20taxable%20services.

⁶ Tex. Admin. Code Rule §3.356

https://texreg.sos.state.tx.us/public/readtac\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_ploc=&p_ploc=&p_1&p_tac=&ti=34&pt=1&ch=3&rl=356

⁷ Tex. Admin. Code Rule §3.357

https://texreg.sos.state.tx.us/public/readtac\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=34&pt=1&ch=3&rl=357

Washington indicates that retail services, including construction services, are subject to sales tax at a rate of 6.50% plus local option up to 4.10%, totaling 10.60%.⁸ These construction services include constructing and improving new or existing buildings and structures; cleaning, fumigating, razing or moving structures, including painting and papering, cleaning and repairing furnaces and septic tanks, and snow removal; clearing land and moving earth; drilling oil or water wells; building or improving streets, roads, etc.; hazardous waste site cleanup; radioactive waste cleanup; and other services related to the performance of the aforementioned list.⁹ Permit and fee charges, labor, profit, and materials and charges for subcontractors are all subject to taxation. Primary contractors collect the retail sales tax on the gross contract price from the owner of the land. Unless the sales tax is explicitly calculated in the contract, the state department of revenue assumes that the sales tax is due on the total contracted price. The sales tax rate is dependent on the jurisdiction and contractors collect sales tax based on the jurisdiction where the services are performed. If the construction services were completed at an out-of-state site, Washington sales tax is not required.

⁸ Walczak, Jared, "State and Local Sales Tax Rates, 2024". Tax Foundation, February, 6, 2024. https://taxfoundation.org/data/all/state/2024-sales-taxes/

⁹ Wash. Admin. Code § 458-20-170 https://app.leg.wa.gov/wac/default.aspx?cite=458-20-170

Economic Impact

This section presents the economic activity attributed to Georgia's sales tax exemption for construction services. The analysis begins with estimates of gross economic activity generated by the sales tax exemption for construction services projected from 2024 to 2029. Next, this section presents calculations of net economic activity generated by the exemption and calculates the return on investment for the exemption. In the following section, these results are compared with the economic activity that would have been generated under an alternate-use scenario in which the state collects sales taxes on construction services and spends that revenue in a manner similar to all other tax revenues. These calculations allow for a direct comparison between the return on investment of the Georgia sales tax exemption for construction services (NAICS code 23) and the counterfactual situation in which the state is assumed to collect sales tax on construction services. For more information on the methodology and IMPLAN, see Appendix B.

GROSS ECONOMIC ACTIVITY

Institute researchers projected construction output with and without the sales tax exemption from 2024 through 2029 based on the historical trend in construction data from IBISWorld, a widely recognized industry research and analytics firm. Construction estimates were adjusted to exclude building materials, which are already taxed under Georgia law as tangible personal property. Results are displayed in Table 1. Under the current scenario in which the sales tax exemption exists, institute researchers estimated that construction generated \$72.08 billion in revenue in 2024, increasing to \$79.78 billion in 2029. Total construction output with the tax exemption amounted to \$455.97 billion over the 6-year period from 2024 to 2029.

To project construction sector output with a sales tax on construction services, projected output under the current "no tax" scenario must be reduced to account for the higher construction costs resulting from imposition of the sales tax. This estimated reduction is accounted for by the application of a price elasticity of demand for construction services. Price elasticity of demand is a measure of the change in demand for goods or services in response to a change in price. Institute researchers utilized –0.5% for the price elasticity of demand for construction services based on a review of academic literature on the demand for residential and commercial construction. For more detailed information on elasticity, see Appendix C. Based on the assumption that a state tax on construction services would be accompanied by a local sales tax as well, a 7.4% (state and local combined) increase in the cost of construction services (construction materials are already taxed); would amount to a reduction in the demand for construction services by 3.7%. Under this counterfactual scenario in which construction services are taxed, construction services would generate \$69.41 billion in revenue in 2024, increasing to \$76.83 billion by 2029. The lost output between the current (tax exempt) and counterfactual (taxed) scenarios increases from \$2.67 billion in 2024 to \$2.95 billion by 2029. Over a six-year period, the total reduction in construction services output as a result of a sales tax on construction services would be \$16.87 billion.

Year	Value of Construction Services w/Exemption	Value of Construction Services w/o Exemption	Increase in Value of Construction Services Due to Exemption	% Change Due to Exemption
2024	\$72,077,099,010	\$69,410,246,347	\$2,666,852,663	3.70%
2025	\$73,311,935,340	\$70,599,393,732	\$2,712,541,608	3.70%
2026	\$75,420,656,710	\$72,630,092,412	\$2,790,564,298	3.70%
2027	\$76,935,878,740	\$74,089,251,227	\$2,846,627,513	3.70%
2028	\$78,446,901,820	\$75,544,366,453	\$2,902,535,367	3.70%
2029	\$79,776847,080	\$76,825,103,738	\$2,951,743,342	3.70%
Total	\$455,969,318,700	\$439,098,453,908	\$16,870,864,792	3.70%

Table 1. Projected construction services output, modeled with and without tax exemption (2024-2029).

Source: Institute of Government Projections based on IBISWorld Data.

The research team projected forgoneforgone state revenue as a percentage of total construction services, and modeled the estimated economic impact to the state economy of the sales tax exemption using IMPLAN¹⁰. Results are shown in Table 2. Forgone state revenue ranges from \$2.88 billion in 2024 to \$3.19 billion in 2029. Increased spending on construction as a result of the sales tax exemption on construction services is estimated to add \$2.83 billion in value-added economic activity to the state's economy in 2024, growing to \$3.26 billion by 2029.

The economic ROI of the exemption is calculated as the return to net forgone tax revenue (e.g. gross forgone revenue less additional taxes collected due to an expanded construction sector) from the value-added impact of the exemption. Projected ROI ranges from 5.7% in 2024 to 9.9% in 2029. ROI grows by approximately 1% per year due to the increasing value added to the construction sector relative to the cost of construction services required to produce that level of output. In other words, the model predicts that the value of construction output will rise slightly faster than the cost required to create it, or, in layman's terms, real estate values will climb slightly faster than construction wages.

¹⁰ IMPLAN® model, 2021 Data, using inputs provided by the user and IMPLAN Group LLC, IMPLAN System (data and software), 16905 Northcross Dr., Suite 120, Huntersville, NC 28078 www.IMPLAN.com

	2024	2025	2026	2027
Net Forgone State Rev.	\$2,681,493,694	\$2,727,433,472	\$2,805,884,506	\$2,862,255,510
Exemption Value-Added	\$2,834,246,242	\$2,903,774,251	\$3,009,883,178	\$3,094,483,304
ROI of Exemption ¹	0.057	0.065	0.073	0.081
	2028	2029		
Net Forgone State Rev.	\$2,918,470,298	\$2,967,948,424		
Exemption Value-Added	\$3,181,043,923	\$3,262,471,537		
ROI of Exemption ¹	0.090	0.099		

Table 2. Reduction in economic impact of construction without the sales tax exemption, 2024-2029.

Source: Institute of Government Projections based on IBISWorld Data & IMPLAN 2021.

1. ROI of the tax exemption is calculated based on Net Forgone State Revenue (e.g. gross forgone revenue less additional state taxes collected).

Table 3 shows the increase in employment, labor income, value added to the state economy, and construction services output for the sample year 2024. The sales tax exemption for construction services is estimated to support an additional 15,208 construction services related jobs, 5,116 indirect jobs in industries that supply inputs to the construction sector, and 6,578 induced jobs as workers in those direct and indirect jobs spend their earnings on additional goods and services. Labor income figures in Table 3 represent the additional salary dollars associated with the jobs, while value-added represents the additional value added to the state economy as a result of increased construction activity. Output figures capture the total amount of additional output attributable to the tax exemption.

Table 3. Economic Impact Detail of the Sales Tax Exemption for Construction Services for2024.

IMPACT	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
DIRECT	15,208	\$920,750,938	\$1,463,238,566	\$2,666,852,662
INDIRECT	5,116	\$354,355,872	\$658,069,732	\$1,226,813,161
INDUCED	6,578	\$370,831,709	\$712,937,944	\$1,210,312,579
TOTAL	26,902	\$1,645,938,518	\$2,834,246,242	\$5,103,978,402

SOURCE: INSTITUTE OF GOVERNMENT PROJECTIONS BASED ON IBISWORLD DATA & IMPLAN 2021

ALTERNATE USE OF FORGONE REVENUE

As part of this tax incentive evaluation, the research team was tasked with calculating how much economic activity would be generated if the exemption for construction services did not exist and a tax on services was collected and spent by the state of Georgia. To compare the ROI of the counterfactual scenario to the current scenario, the research team modeled the economic impact of the alternate use of forgone revenue. The alternate use of forgone revenue assumes that the state collects sales tax on construction services and spends that revenue on goods and services that it typically provides to taxpayers. Forgone revenue is modeled in IMPLAN as the direct output of state spending.

Table 4 displays the economic impact of the state collecting and spending \$2.88 billion in sales taxes collected on construction services in 2024. According to IMPLAN estimates, \$2.88 billion in taxes on construction services would support the equivalent of 56,117 state jobs, 5,313 indirect jobs, and 14,099 induced jobs for a total of 75,529 jobs. For each additional \$1 million in state spending, 19 state jobs are created. Each additional \$1 million in state spending also supports two indirect jobs and five induced jobs. Based on IMPLAN estimates, \$2.88 billion in state spending would add \$4.31 billion in value-added impact to Georgia's GDP. These results should be interpreted with extreme caution due to the fact that IMPLAN's multiplier-based algorithms simply apply percentages of a state salary budget to all additional state revenues. In reality, 56,117 state jobs would nearly double the size of the state workforce. The most likely case is that such a tax would result in some marginal expansion of state employment and an additional state budget surplus that would be directed towards other uses. Thus, the correct interpretation should be that the tax would generate revenue sufficient to support the equivalent of 56,117 state jobs. A large percentage of indirect and induced jobs attributed to the increased tax revenue would be offset by job losses attributed to a reduced construction sector. An important point to note is that IMPLAN predicts that 15,208 construction sector jobs (Table 4.) would be lost due to a tax on construction services. The net effect of tables 3 and 4 would amount to a net gain of 197 indirect jobs and 7,521 induced jobs.

IMPACT	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
DIRECT	51,560	\$2,258,277,718	\$2,059,905,079	\$2,883,083,931
INDIRECT	4,882	\$287,451,383	\$495,589,768	\$967,138,832
INDUCED	12,954	\$730,469,191	\$1,402,032,614	\$2,381,256,975
TOTAL	69,396	\$3,276,198,291	\$3,957,527,461	\$6,231,479,738

Table 4. Economic impact of \$2.88 billion in state taxes of	n construction services, 2024.
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Source: Institute of Government Projections & IMPLAN 2022. Note: Refer to prior paragraph for guidance on interpretation of results in Table 4.

NET ECONOMIC ACTIVITY

Under the counterfactual scenario, state sales tax was calculated on projected construction services. Forgone state revenue is estimated at \$2.88 billion in 2024, increasing to \$3.19 billion in 2029 (Table 5). Over the six-year period from 2024 to 2029, total forgone state revenue amounts to \$18.24 billion. Table 5 also displays the value-added economic impact (GDP) of construction services spending attributable to the exemption, which ranges from \$2.83 billion in 2024 to \$3.26 billion in 2029. The estimated ROI of Georgia's sales tax exemption on constructions services (Table 5), ranges from 5.7% in 2024 to 9.9% in 2029. In the counterfactual scenario, where the state collects and spends sales tax revenue on construction services, the value-added impact ranges from \$3.96 billion in 2024 to \$4.31 billion in 2029. The ROI of the counterfactual scenario is 37.3% over the projected time period.

Table 5. Forgone state revenue due to the sales tax exemption construction services and value-added economic impact of alternate use scenario, 2024-2029.

	2024	2025	2026	2027
Gross Forgone State Rev.	\$2,883,083,960	\$2,932,477,414	\$3,016,826,268	\$3,077,435,150
Net Forgone State Rev.	\$2,681,493,694	\$2,727,433,472	\$2,805,884,506	\$2,862,255,510
Exemption Value-Added	\$2,834,246,242	\$2,903,774,251	\$3,009,883,178	\$3,094,483,304
ROI of Exemption ¹	0.057	0.065	0.073	0.081
Alt. Use Value-Added	\$3,957,527,461	\$4,025,328,452	\$4,141,111,728	\$4,224,307,819
ROI of Alternate Use ²	0.373	0.373	0.373	0.373
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ROI of Exemption ¹	0.090	0.099		
Alt. Use Value-Added	\$4,307,273,357	\$4,307,273,357		
ROI of Alternate Use ²	0.373	0.373		

Source: Institute of Government Projections & IMPLAN 2022.

- 1. ROI of the tax exemption is calculated based on Net Forgone State Revenue (e.g. gross forgone revenue less additional state taxes collected).
- 2. ROI of the alternate use is calculated based on Gross Forgone State Revenue

Fiscal Impact

SB366 tax incentive evaluations are required to calculate the fiscal impact of credits and exemptions as well as the economic impact. The fiscal impact of a tax exemption sums forgone state revenue, increased state tax collections, and any cost to the state of administering the exemption. Forgone revenue was calculated as 4.0% of taxable construction services. The research team modeled additional state revenue generated by the exemption using IMPLAN. The research team could identify no recent examples of states that have established such a complex tax collection program as would be required to collect sales tax on construction services. However, the cost of hiring and training additional staff, developing new tax forms and programing software for a collection and auditing program would be substantial.

The difference in state tax between the current (with exemption) and counterfactual (without exemption) scenarios is displayed in Table 6. Increased state tax collections due to the exemption range from \$201.59 million in 2024 to \$223.13 million in 2029 for a total increase of \$1.28 billion over the seven-year period. The fiscal impact of Georgia's tax exemption for construction services ranges from -\$2.68 billion in 2024 to -\$2.97 billion in 2029. Fiscal impact of the exemption over the seven-year period from 2024 to 2029 totaled to -\$16.96 billion in state revenue.

	FORGONE STATE	INCREASED STATE TAX	FISCAL IMPACT
YEAR	REVENUE	COLLECTIONS	
2024	\$(2,883,083,960)	\$201,590,266	\$(2,681,493,694)
2025	\$(2,932,477,414)	\$205,043,942	\$(2,727,433,472)
2026	\$(3,016,826,268)	\$210,941,762	\$(2,805,884,506)
2027	\$(3,077,435,150)	\$215,179,640	\$(2,862,255,510)
2028	\$(3,137,876,073)	\$219,405,775	\$(2,918,470,298)
2029	\$(3,191,073,883)	\$223,125,459	\$(2,967,948,424)
TOTAL	\$(18,238,772,748)	\$1,275,286,844	\$(16,963,485,904)

Table 6. Forgone state revenue due to the sales tax exemption on construction services, increased state tax collections due to the exemption, and fiscal impact of the exemption, 2024-2029.

Ancillary Impacts

Although the intent of exempting services in general, and construction services in particular, from sales tax in Georgia is not explicitly identified, it is assumed that it is because services are implicitly taxed as labor under the state's income tax. This sales tax exemption for construction services marginally stimulates economic development and promotes decreased construction costs. More affordable construction increases building opportunities for new residential and commercial structures. Building projects produce jobs in the construction industry, along with jobs in related areas such as landscaping, building material production and sales, architecture, surveying, and legal services. Newly constructed buildings result in an increased housing stock and more space for businesses. According to comments provided by the Georgia Association of Manufacturers, the sales tax exemption for construction services improves the availability of affordable housing in Georgia, serving as a key incentive for businesses to invest further in local communities.

Adopting a blanket sales tax on construction services in Georgia would add an additional cost to all new construction including residential housing, as well as industrial and commercial buildings. It would also increase the cost of maintaining and improving existing structures. States that currently tax construction services typically tax a very narrowly defined group of services such as lawn maintenance, pest control, and waste removal. Others choose to tax certain maintenance and improvement activities, but do not tax new construction.

Several pros and cons exist in consideration of taxing construction services. Such a tax has the potential to raise significant amounts of revenue without causing a major contraction in the construction industry due to the relatively inelastic nature of the demand for services in the construction trades. It would impact buyers of new homes, or other structures, to a greater extent than those desiring to maintain existing structures. Consequently, it is likely to fall disproportionally on wealthier home or business owners. The immediate impact of the tax would also be mitigated to some extent by the fact that a significant portion of it would be rolled into mortgages and paid over time. As a result of making construction and maintenance more expensive, it would have a negative impact on the number of construction jobs in the state, but a slightly positive impact on overall jobs numbers through net creation of indirect and induced jobs. As noted earlier in this report, the expansive increase in the number if state jobs should to be interpreted with caution, as the IMPLAN model results simply mean that sufficient revenue would be generated to *support* this many jobs. One obvious consideration may be that such a tax could be used to reduce the state's tax burden in other areas, or to shift the tax burden away from lower income groups that do not own homes. Utilizing a construction services tax in this manner would need to take into consideration, the volatility of the construction industry as its revenues ebb and flow with changes in interest rates, economic recessions, pandemics, and other unpredictable macroeconomic events.

Appendix

A. INFORMATION ON NAICS SECTOR 23 AS DEFINED BY THE U.S CENSUS BUREAU

The Construction sector comprises establishments primarily engaged in the construction of buildings or engineering projects (e.g., highways and utility systems). Establishments primarily engaged in the preparation of sites for new construction and establishments primarily engaged in subdividing land for sale as building sites also are included in this sector.

Construction work done may include new work, additions, alterations, or maintenance and repairs. Activities of construction establishments generally are managed at a fixed place of business, but the establishments usually perform construction activities at multiple project sites. Production responsibilities for establishments in this sector are usually specified in (1) contracts with the owners of construction projects (prime contracts) or (2) contracts with other construction establishments (subcontracts).

Establishments primarily engaged in contracts that include responsibility for all aspects of individual construction projects are commonly known as general contractors, but also may be known as design-builders, construction managers, turnkey contractors, or (in cases where two or more establishments jointly secure a general contract) joint-venture contractors. Construction managers who provide oversight and scheduling only (i.e., agency) as well as construction managers who are responsible for the entire project (i.e., at risk) are included as general contractor type establishments. Establishments of the "general contractor type" frequently arrange construction of separate parts of their projects through subcontracts with other construction establishments.

Establishments primarily engaged in activities to produce a specific component (e.g., masonry, painting, and electrical work) of a construction project are commonly known as specialty trade contractors. Activities of specialty trade contractors are usually subcontracted from other construction establishments, but especially in remodeling and repair construction, the work may be done directly for the owner of the property.

Establishments primarily engaged in activities to construct buildings to be sold on sites that they own are known as for-sale builders, but also may be known as speculative builders or merchant builders. For-sale builders produce buildings in a manner similar to general contractors, but their production processes also include site acquisition and securing of financial backing. For-sale builders are most often associated with the construction of residential buildings. Like general contractors, they may subcontract all or part of the actual construction work on their buildings. There are substantial differences in the types of equipment, work force skills, and other inputs required by establishments in this sector. To highlight these differences and variations in the underlying production functions, this sector is divided into three subsectors.

Subsector 236, Construction of Buildings, comprises establishments of the general contractor type and for-sale builders involved in the construction of buildings. Subsector 237, Heavy and Civil Engineering Construction, comprises establishments involved in the construction of engineering projects. Subsector 238, Specialty Trade Contractors, comprises establishments engaged in specialty trade activities generally needed in the construction of all types of buildings.

Force account construction is construction work performed by an enterprise primarily engaged in some business other than construction for its own account, using employees of the enterprise. This activity is not included in the construction sector unless the construction work performed is the primary activity of a separate establishment of the enterprise. The installation and the ongoing repair and maintenance of telecommunications and utility networks is excluded from construction when the establishments performing the work are not independent contractors. Although a growing proportion of this work is subcontracted to independent contractors in the Construction sector, the operating units of telecommunications and utility companies performing this work are included with the telecommunications or utility activities.

B. ECONOMIC MODELING USING IMPLAN

Economic impact modeling is a technique used to estimate how a new firm, facility, or policy change will affect a region's economy. Such estimates are often produced using an input-output model that first calculates a baseline forecast of economic activity for the geographic region and then estimates how shocks (inputs) to the economy alter economic activity (output). In this report, Institute of Government researchers estimated the economic impact of a tax on construction services.

Institute researchers use IMPLAN, a widely used county-level economic model of the United States, to estimate the economic impact of the special deduction¹¹. This model produces a baseline economic forecast using data from the US Census Bureau, the North American Industry Classification System (NAICS), the Bureau of Economic Analysis, and the Bureau of Labor Statistics as well as other data from the US Department of Commerce.

In IMPLAN, an input, or change to the economy, is added to the model. Inputs can be new jobs, labor income, increased demand for goods and services, or policy changes, such as tax deductions. IMPLAN estimates the increase or decrease in economic activity resulting from the change. The economic measures reported by the model include the number of jobs supported, the labor income associated with those jobs, the value added (or lost) to the economy in the geographic region being studied, and the total economic output added (or lost) because of the change. IMPLAN provides estimates of the direct, indirect, and induced effects of an economic event – in this case, the construction services sales tax exemption. Direct, indirect, and induced effects are estimated for employment, labor income, value-added impact, and total output impact.

¹¹ IMPLAN® model, 2021 Data, using inputs provided by the user and IMPLAN Group LLC, IMPLAN System (data and software), 16905 Northcross Dr., Suite 120, Huntersville, NC 28078 www.IMPLAN.com

C. PRICE ELASTICITY OF DEMAND

The pivotal question in most tax exemption studies is commonly referred to as the "but for" question. It seeks to answer the question, "but for" the tax exemption, how would taxpayers behave, and thus resultant tax collections, be different? In the case of taxation of construction services, researchers approach the question by means of a counterfactual example, in other words, by asking the question of how new construction sales and related taxes might be different if the tax on construction services was enacted.

In the field of economics, this amounts to estimating the price elasticity of demand for residential and commercial construction demand. The price elasticity of demand for any good is the percentage change in the quantity demanded given a 1% change in its price. To apply this terminology to the case of construction services, if the price of construction labor (services) were to rise by 1% in the absence of the sales tax exemption, demand could logically be expected to either fall or stay the same depending on buyer sensitivity to price (i.e. elasticity). If the demand for construction services were to fall in response to rising prices, the demand for construction services would be termed elastic, and if it were to stay the same, it would be termed inelastic. In short, answering the question "but for" is synonymous with estimating the price elasticity of demand.

When considering a tax on construction services, understanding the price elasticity of housing demand is of importance. Researchers hypothesize that a tax on construction services will raise the overall price of constructing or repairing commercial and residential property. If the cost of building increases, several outcomes are possible. The demand for construction decreases to reach a new equilibrium, building sizes decrease slightly, building quality/ materials decrease in quality, or consumers absorb the increased cost. With financing, the tax on construction services added to the price of the building would result in small increases to monthly payments.

Several academic researchers sought to estimate the price elasticity for housing demand in the United States over the last several decades, though more recent studies use price elasticity of housing demand as to examine more complicated housing trends and outcomes. Researchers estimate the short run price elasticity of housing demand to be relatively inelastic, with values between –0.12 and –0.697. Hanushek and Quigley (1980), prepare price elasticity estimates to understand the responsiveness of housing demand when major U.S. cities face price changes.¹² With a simple adjustment model, the short-run price elasticity estimates for Pittsburgh and Phoenix are -0.12 and -0.16. A more general equation for the expanded adjustment model produces price elasticities of –0.36 for Pittsburgh and –0.41 in Phoenix.

¹² Hanushek, Eric A., and Quigley, John M. "What is the Price Elasticity of Housing Demand?" Review of Economics and Statistics, August 1980.

Goodman (1988) derives a model for permanent income, housing price, tenure choice, and housing demand, which is then used to estimate the renter and owner price elasticity of demand for housing.¹³ The combined owner and renter price elasticity is -0.464 in the short run. Ioannides and Zabel (2003) find the price elasticity to be -0.199 when using the standard housing demand equation.¹⁴ After developing a reduced form equation for own housing demand with neighbors' socioeconomic and house characteristics as additional regressors, the price elasticity is -0.427. The log-linear housing demand model with cluster-specific random effects produces a price elasticity of -0.244. Albouy et al. (2016) determine a housing demand estimate with a framework based on spatial equilibrium conditions.¹⁵ The uncompensated price elasticity of demand is -0.697. An own-price elasticity of -0.55 is derived from BEA data backed by the official Consumer Price Index. While Ermisch et al. (1996) study the price elasticity of housing demand in the UK, the short-run price elasticity of demand is comparable to U.S. examples with an estimate of -0.4.16 The resulting weighted average price elasticity of demand for residential and commercial construction was -0.05. This elasticity measure was used to estimate the reduction in sales taxes on construction services collected in the state if the full cost of a tax increase resulting from removal of the construction services sales tax exemption was passed on to consumers.

¹³ Goodman, Allen C. "An econometric model of housing price, permanent income, tenure choice, and housing demand." *Journal of Urban Economics*, May 1988.

¹⁴ Ioannides, Yannis M., and Zabel, Jeffrey E. "Neighborhood Effects and Housing Demand". *Journal of Applied Econometrics*, September 2003.

¹⁵ Albouy, David et al. "Housing Demand, Cost-of-Living Inequality, and the Affordability Crisis." *NBER Working Paper 22816*, November 2016.

¹⁶ Ermisch, J.F. et al. "The Price Elasticity of Housing Demand in Britain: Issues of Sample Selection." *Journal of Housing Economics*, 5(1), March 1996.