Commonwealth of Virginia
June 4, 2025

Report to the Governor and the General Assembly of Virginia

Workforce & Industry Incentives

Economic Development Incentives Evaluation Series

COMMISSION DRAFT

JLARC
JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

JLARC Report 604

http://jlarc.virginia.gov

Contents

Summary: Workforce and Industry Incentives

This report examines 10 incentives Virginia provides to encourage workforce development and to support certain industries. Spending on these incentives averaged $18 million annually between FY14 and FY23 and totaled $177 million over this period. Most of the spending was for the Virginia Jobs Investment Program (VJIP), the Virginia Talent Accelerator Program, and the sales and use tax exemption for certain printed materials. The 10 workforce and industry incentives comprised about 4 percent of total spending on state economic development incentives between FY14 and FY23.

WHY WE DID THIS STUDY

Through language in the Appropriation Act, the General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to review and evaluate economic development initiatives. Topics include spending on incentives and activity generated by businesses receiving incentives; the economic benefits of incentives; and the effectiveness of incentives.

JLARC releases two reports each year: a high-level summary report on overall spending and business activity and an in-depth report on the effectiveness of individual incentives. (See Appendix A: Study mandate.) JLARC contracts with the Weldon Cooper Center for Public Service to perform the analysis for both reports.

This report is the ninth in the series of in-depth reports on the effectiveness of individual incentives and focuses on Virginia's business workforce and industry incentives.

WHAT WE FOUND

VJIP is one of the state's most widely used incentives, and projects met their job creation goals

VJIP is one of the state's oldest economic development incentives and is designed to encourage job creation and employee training at new or expanding businesses. The program has the second highest number of recipients of Virginia's incentive grants and is rated the most useful economic development incentive program by local economic developers. However, the number of annual awards and the average award per job have both declined. Declining award amounts per job could reduce the program's attractiveness and its ability to sway business decisions, so the VJIP program has been reviewing its application scoring used to determine the award per job and anticipates increasing the amount.

VJIP projects have collectively met their job creation goals, and the program has moderate economic benefits. VJIP also fully or partially meets most (seven out of the nine) features of effective incentive design, but the program's wage requirement is not aligned with the local prevailing average wage, and minimum requirements have no allowances for economically distressed areas.

Initial projects would have proceeded without the Virginia Talent Accelerator Program, but it is preferred by stakeholders and is generally well designed

The Virginia Talent Accelerator Program, created in 2019, is a "turnkey" workforce program designed to attract businesses to the state by providing customized recruitment and training services. Most of the initial program recipients indicated in a 2022

Weldon Cooper Center survey that their projects would have proceeded as planned without the Virginia Talent Accelerator Program. However, this may not be fully reflective of the program's current impact because it is only based on survey results from initial projects and does not include more recent ones. Virginia Economic Development Partnership (VEDP) staff believe that a higher proportion of recent program participants would rate the program as having an impact on their firm's location or expansion decisions, because the program is now more fully developed. They also indicate the program can be a differentiator or tipping point in a firm's final decision.

Businesses and site selection consultants prefer this "turnkey" customized incentive over other workforce grants and tax incentives. Such customized programs may help ensure that businesses receiving other incentives, such as custom grants, are successful at meeting and maintaining job creation goals. The Virginia Talent Accelerator Program largely meets the criteria of effective incentive design, although it does not have a capital investment requirement. The program has low economic benefits and a moderate return in state revenue when the value of the program is assessed based on its costs, but these results are based on only two years of data and may not capture the full impacts of the program over a longer period.

Use of the worker training tax credit has been low, and it will expire in July 2025

The purpose of the Worker Training Tax Credit is to encourage businesses to train workers to improve productivity and retain employees. Only five businesses were awarded worker training tax credits between FY19 and FY23, and the total award amount was far below the overall annual cap for the credit. Several factors may lead to low utilization, including a low credit amount per job. The worker training tax credit is mostly used for registered apprenticeships, but it likely has a limited influence on apprenticeship rates. Labor demand, labor supply, and workforce or education policies tend to have more effect on a state's apprenticeship rate. The tax credit has negligible economic benefits and expires on July 1, 2025.

Industry tax exemptions have negligible to low economic benefits but serve purposes other than economic development

Virginia provides sales and use tax exemptions for multiple industries, seven of which are evaluated in this report,

- certain printed material for out-of-state distribution exemption,
- contractor temporary storage exemption,
- controlled environment agriculture exemption,
- high-speed electrostatic duplicators exemption,
- out-of-state nuclear facility repair exemption,

- taxi parts and radios exemption, and
- the uniform rental and laundry business exemption.

Some of these exemptions benefit the industry directly and others are provided to industry customers.

The industry exemptions meet few criteria for effective incentive design and have negligible or low economic benefits. However, they were adopted for reasons other than just economic development, including preserving the competitiveness of an industry and advancing good tax policy principles, such as not taxing intermediate inputs. These purposes may warrant their retention even if the economic development benefits are minimal.

Workforce and industry incentives have economic benefits ranging from moderate to negligible (FY14-FY23)

Program	Annual average spending	Incentive type	Economic benefit per $1M of spending
Virginia Jobs Investment Program (VJIP)	$4.9M	Grant	●●●○
Taxi parts exemption	0.1	Exemption	●●○○
Uniforms exemption	0.8	Exemption	●●○○
Virginia Talent Accelerator Program	4.0	Grant [a]	●○○○
Printed materials exemption	9.9	Exemption	●○○○
Contractor temporary storage exemption	0.1	Exemption	●○○○
Electrostatic duplicators exemption	<0.1	Exemption	●○○○
Nuclear repair facilities exemption	0.1	Exemption	●○○○
Worker Training Tax Credit	0.1	Tax credit	●○○○
Controlled environment agriculture exemption	--	Exemption	--
Total	**$17.7M**		
Negligible ●○○○ Low ●●○○ Moderate ●●●○ High ●●●●			

SOURCE: Weldon Cooper Center economic impact analysis of incentives.
NOTE: The economic benefits of each incentive are assessed relative to the economic benefits of all other incentives evaluated in this series to date. Economic benefits can range from negligible to high. There is no economic benefit for the controlled environment agriculture exemption during this 10-year period because the exemption was adopted in 2023 and was not used.
[a] Not technically a grant. Provides in-kind rather than financial assistance to the business and is classified as a grant for purposes of this evaluation series.

WHAT WE RECOMMEND

Legislative action

- Tie VJIP's wage requirement to the prevailing local average wage.
- Reduce VJIP's minimum eligibility requirements for projects in economically distressed areas.

- Review the industry exemptions to determine whether they are meeting worthwhile needs other than economic development.

Executive action

- Establish a minimum capital investment threshold for the Virginia Talent Accelerator Program.

The complete list of recommendations is available on page v.

Recommendations: Workforce and Industry Incentives

RECOMMENDATION 1

The General Assembly may wish to consider amending § 2.2-2204.3 of the Code of Virginia to tie the wage threshold eligibility for the Virginia Jobs Investment Program for newly created jobs to a percentage of the prevailing average annual wage in the locality. New jobs should pay at least 80 percent of the local prevailing average wage.

RECOMMENDATION 2

The General Assembly may wish to consider amending § 2.2-2204.3 of the Code of Virginia to allow reductions in minimum eligibility requirements of the Virginia Jobs Investment Program for projects in economically distressed areas of the state.

RECOMMENDATION 3

The Virginia Economic Development Partnership staff should analyze the capital investments made by projects that have received assistance from the Virginia Talent Accelerator Program and establish a minimum capital investment threshold for the program.

RECOMMENDATION 4

The Joint Subcommittee to Evaluate Tax Preferences may wish to consider reviewing, under its authority in § 30-338 of the Code of Virginia, the exemptions for 1) certain printed materials for out-of-state distribution, 2) contractor temporary storage, 3) controlled environment agriculture, 4) high-speed electrostatic duplicators, 5) out-of-state nuclear facility repair, 6) taxi parts and radios, and 7) uniform rental and laundry businesses. The review's purpose should be to determine whether these exemptions are meeting worthwhile needs other than economic development and whether they should be maintained, eliminated, or revised.

RECOMMENDATION 5

The General Assembly may wish to consider amending the Code of Virginia to adopt expiration dates for the exemptions for 1) contractor temporary storage, 2) controlled environment agriculture, 3) high-speed electrostatic duplicators, 4) out-of-state nuclear facility repair, 5) taxi parts and radios, and 6) uniform rental and laundry businesses.

RECOMMENDATION 6

The Virginia Department of Taxation should develop new estimates of business tax savings for the exemptions for 1) contractor temporary storage, 2) certain printed materials for out-of-state distribution, and 3) out-of-state nuclear repair facilities.

Workforce and Industry Incentives

Economic Development Incentives Evaluation Series

Virginia provides economic development incentives to encourage business growth as part of its economic development strategy. To better understand the effectiveness of these incentives in stimulating business activity, the General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to conduct, on a continuing basis, an evaluation of the effectiveness and economic benefits of economic development incentives such as grants, tax preferences, and other assistance. (See Appendix A for the study mandate.) This report is part of a series of annual reports that provide comprehensive information about the effectiveness and economic benefits of individual economic development incentives offered by the state. JLARC contracted with the University of Virginia's Weldon Cooper Center for Public Service to perform the evaluation.

This report examines 10 economic development incentives to encourage workforce improvement and support certain industries (Table). The Virginia Jobs Investment Program (VJIP) administered by the Virginia Economic Development Partnership (VEDP) is the state's largest workforce-related incentive, with annual spending of about $5 million during the 10-year period studied (FY14–FY23). VJIP provides funds to companies for onboarding (i.e., recruitment, screening, and training) of new employees at new or expanding businesses and funds for retraining existing employees at businesses that meet employment, capital investment, industrial sector, and other program eligibility requirements. Seven industry-specific sales and use tax exemptions are also included in this report. Most of these exemptions are relatively small, with the exception being the exemption for certain printed materials for out-of-state distribution—the largest incentive covered in this report.

Spending on these workforce and industry incentives is a relatively small portion of Virginia's total spending on economic development incentives. Spending on these incentives is estimated to represent just 4.3 percent of nearly $4.2 billion in total spending on economic development incentive grants, tax credits, and sales and use tax exemptions between FY14 and FY23. (See *Economic Development Incentives 2024*, JLARC 2024.)

TABLE: Ten incentives to encourage workforce improvement or support certain industries are covered in this report

	Spending FY14–FY23	
Incentive	**Annual average**	**Total**
Workforce improvement		
Virginia Jobs Investment Program	$4.9 M	$49.4 M
Virginia Talent Accelerator Program	4.0	16.0
Worker Training Tax Credit	0.1	0.2
Industry tax exemptions		
Certain printed materials for out-of-state distribution exemption	9.9	99.4
Uniform rental and laundry businesses exemption	0.8	8.2
Out-of-State Nuclear Facility Repair exemption	0.1	1.4
Taxi parts and radios exemption	0.1	1.2
Contractor temporary storage exemption	0.1	1.1
High-speed electrostatic duplicators exemption	<0.1	0.1
Controlled environment agriculture exemption	--	--
Total, workforce and industry incentives	**$17.7 M**	**$177.1 M**

SOURCE: Weldon Cooper Center review of Code of Virginia and agency documents.
NOTE: Spending on tax credits includes amounts claimed. The controlled environment agriculture exemption was adopted in 2023, so no spending had occurred during this study's timeframe. Spending for FY24 is estimated to be $150,060. Spending for the Virginia Talent Accelerator Program and Worker Training Tax Credit was for FY20–FY23.

Virginia provides other workforce improvement incentives and industry exemptions that are not included in this report. This report does not include workforce improvement incentives that provide assistance directly to the worker, such as the Workforce Credential Grant (FastForward program), which covers a portion of the tuition for certain short-term workforce training programs at Virginia's community colleges. Several industry-related sales tax exemptions are also not included but were addressed in prior reports in this series, including

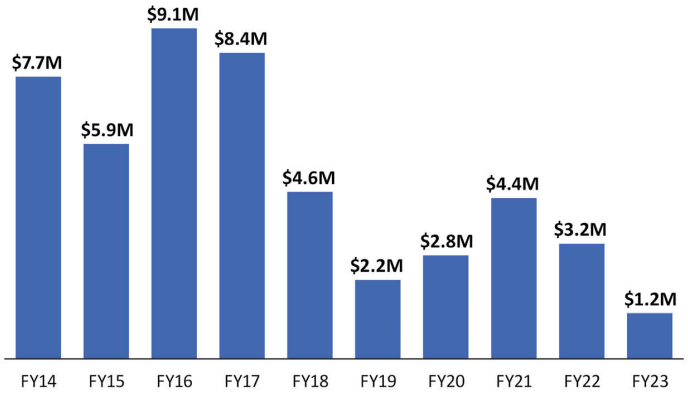
- research and development exemption and spaceport users exemption (*Science and Technology Incentives,* JLARC 2022);
- airline common carrier exemption, aircraft parts, engines, and supplies exemption, railroad common carrier exemption, railroad rolling stock exemption, and ships and vessels exemption (*Trade and Transportation Incentives*, JLARC 2021);
- data center exemption, pollution control equipment and facilities exemption, semiconductor manufacturers exemption, and semiconductor wafers exemption (*Data Center and Manufacturing Incentives*, JLARC 2019); and
- film, TV, and audio production inputs exemption (*Film Incentives*, JLARC 2017).

VJIP

Incentivize job creation and employee training connected to new or expanding businesses

VALUE TO BENEFICIARIES FY14–FY23

Total grant spending: $49.4M

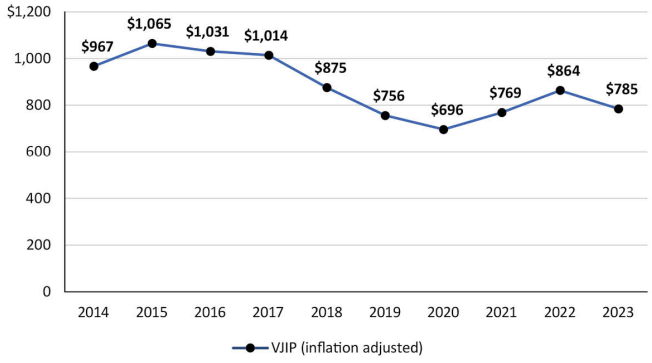


Beneficiaries

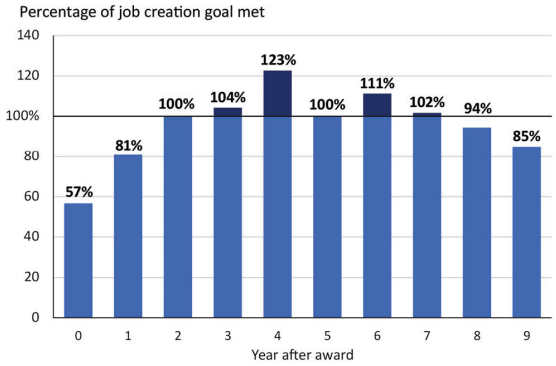
Primarily manufacturers and service-based companies

ACHIEVEMENT OF PURPOSE

Declining VJIP awards per job may impact the grant's attractiveness



VJIP projects collectively met their job creation goals in year two after the grant award



IMPACT TO STATE ECONOMY

FY14–FY23

Economic benefit per $1M in grants

Jobs, state GDP, and personal income

Return in revenue

per $1 spent

- ●●●● High
- ●●●○ Moderate
- ●●○○ Low
- ●○○○ Negligible

1. Virginia Jobs Investment Program

JLARC previously assessed VJIP in 2018 as part of its ongoing series of evaluating the state's economic development incentives. Several changes were made to improve the program based on JLARC's recommendations. The current assessment is of the revised program.

The Virginia Jobs Investment Program (VJIP) is one of the state's oldest economic development incentives and is designed to encourage job creation and employee training at new or expanding businesses. VJIP provides grant funding to eligible businesses

- to offset the costs for recruiting and training new employees or
- to offset employee retraining costs of expanding businesses that make technological or equipment upgrades (Table1-1).

Almost all states offer some form of job creation or training incentive to encourage business location or expansion. (See Appendix D for more information on these incentives by state.)

TABLE 1-1
Virginia Jobs Investment Program (VJIP) encourages job creation and worker training

Purpose	Incentivize job creation and employee training at new or expanding businesses.
Eligible projects	Businesses in tradable industry sectors, such as manufacturing, distribution, corporate headquarters, IT, and research and development. (Grants for retraining are limited to manufacturers and distribution centers.) Must meet minimum requirements for new jobs (or number of retrainings) and capital investment. Pay employees in new jobs or trainees at least 120 percent of the state or federal minimum wage, whichever is higher (currently Virginia's is higher at $12.41 per hour).
Program features	Grant is performance based. Businesses must provide recruitment and training plans and costs as part of the application process and submit reimbursement request forms that include information concerning each employee hired (or retrained) to receive approved grant funding. Employees for which reimbursement is requested must have been working for at least 90 days (new jobs) or after training has been completed (retraining because of upgrades). Reimbursement is on a per job basis (either per job created or per job retrained) and is designed to cover only a portion of the cost of recruitment or training specified in recruitment and training plans and to account for the project's expected benefit to the state.
Use of grant	New jobs programs: offset recruiting and training costs incurred by businesses that create new jobs. Retraining programs: offset employee retraining costs incurred by businesses that implement technological or equipment upgrades.

SOURCE: Weldon Cooper Center review of the Code of Virginia and agency documents.
NOTE: Authorized by § 2.2-2204.3.

VJIP, which has been administered by the Virginia Economic Development Partnership (VEDP) since 2014, has four sub-programs that support job creation and worker training. Two of the sub-programs are for large businesses with 250 or more employees, and the other two are for smaller businesses (Table 1-2). All four sub-programs are targeted at businesses in tradable industries. The new jobs programs are targeted at corporate headquarters, distribution centers, IT, manufacturing, research and development, and shared service center companies. The retraining programs are available

only to manufacturers and distribution centers. In addition to grant funding, VJIP also provides consulting services, such as providing guidance for employee recruitment and selection, evaluating training needs, and connecting firms with workforce and higher education and training providers.

TABLE 1-2
Minimum requirements vary by VJIP sub-program

		Program requirements	
Program	**Jobs**	**Capital investment [a]**	**Size of business**
Virginia New Jobs	25 new	$1,000,000	Business with more than 250 employees
Workforce Retraining	25 retrained		
Small Business New Jobs	5 new	$100,000	Business with 250 or fewer employees
Small Business Retraining	5 retrained		

SOURCE: Weldon Cooper Center review of the Code of Virginia and agency documents; interviews with agency staff.
NOTE: Requirements for jobs and capital investment are minimums. Size of business requirements are company wide.
[a] New capital investment.

The reimbursement amount per job, which is customized by VEDP for each project, and the number of jobs the business anticipates hiring or retraining, are used to determine the maximum VJIP award the business can receive. For example, if the reimbursement per job is $800 and the business expects to create 100 jobs, the maximum award would be $80,000. No funds are distributed until jobs are created or employees are retrained; therefore, the total award to a business may be less than the approved maximum if the business creates fewer jobs or retrains fewer employees than expected.

JLARC'S ***Economic Development Incentives*** reports provide summary information on spending on the state's economic development incentives. This report has been issued annually since 2017. https://jlarc.virginia.gov/econ-development.asp.

VJIP is one of the state's most widely used incentives

VJIP is one of the largest economic development incentive grants in Virginia in both the number of recipients and total amount awarded. The program awards around $7 million annually, and only the Real Property Investment Grant awards a greater number of grants annually (approximately 150 compared with VJIP's 70 grants). (See *Economic Development Incentives 2024*, JLARC 2024, and prior reports in the series.)

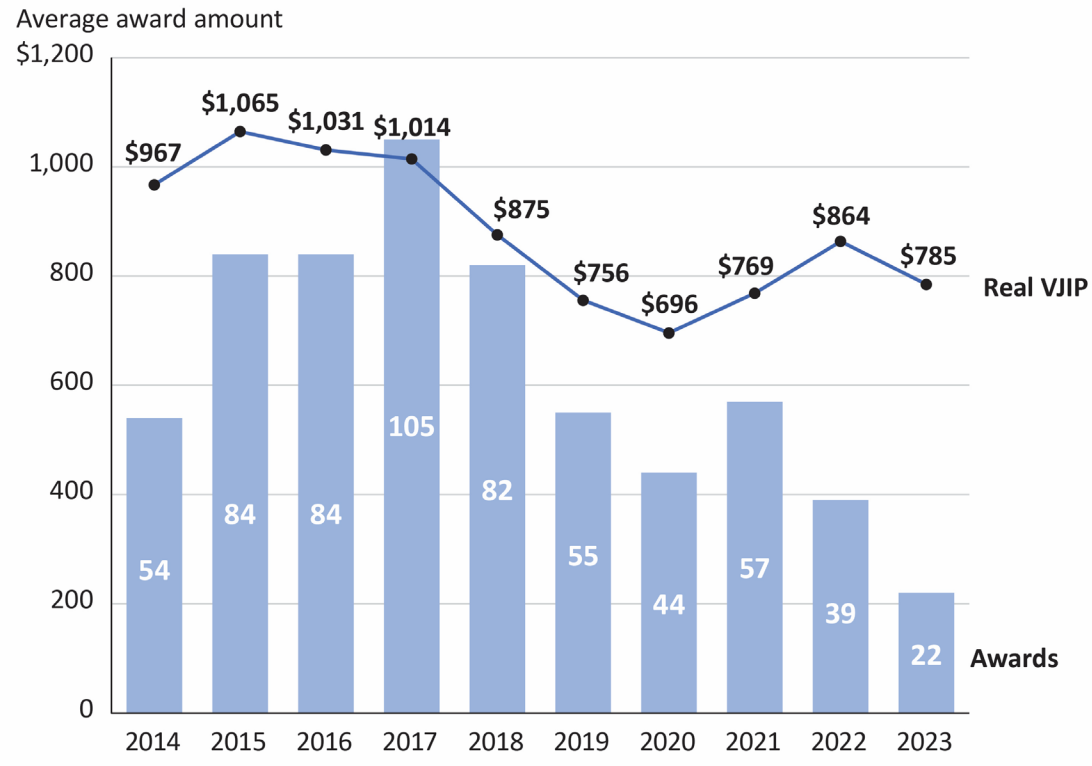
VJIP **awards** over the 10-year period are higher than actual spending because funding is distributed only after jobs are created or workers have completed training, and some projects do not create or train as many jobs as expected.

In a 2020 survey, local economic developers rated VJIP as the state's most useful economic development incentive program out of 33 incentives, likely because it is a widely used incentive. Eighty percent of respondents indicated the incentive program was "very useful," and 12 percent said it was "somewhat useful," giving the program the highest average rating of all incentives. Nearly all respondents were familiar with the program, with only 5 percent reporting not being familiar with it. (See Appendix E for results of the local economic developer survey.)

VJIP awards have declined, and declining awards per job could impact the grant's attractiveness

Although VJIP has one of the highest number of grant recipients, total VJIP award amounts, the number of awards, and the award per job have all declined over time. Total VJIP award amounts and the number of awards have declined for several reasons, including a reduction in annual program appropriations, a suspension of retraining awards between October 2018 and July 2023 (to revamp the program because of reduced appropriations), and the creation of the Virginia Talent Accelerator Program, which larger projects typically choose over VJIP (see the next section of this report for information about this program.) The number of awards per year averaged just over 80 during the first five years of the study period, but the average declined to about half this amount during the last five years. VJIP awarded $967 per job on average in FY14 (in real dollars adjusted for inflation), but the reimbursement dropped to $785 per job by FY23, a 19 percent decrease (Figure 1-1). In contrast, the average award for other incentive grants (excluding custom grants) increased 32 percent over the same time period, from $2,801 per job in FY14 to $3,760 per job in FY23 (in real dollars adjusted for inflation).

FIGURE 1-1
VJIP awards have declined over time



SOURCE: Weldon Cooper Center analysis of VEDP data.
NOTE: Award amount per job is adjusted for inflation.

VJIP is estimated to have a lower ability to sway business decisions than other incentives, in part, because of its lower award amount per job. Higher awards per job mean that a higher percentage of expected project costs are covered by the grant and, therefore, are likely to be more effective in influencing location or expansion decisions. According to a scale developed by a leading expert, Tim Bartik (2018), VJIP is estimated to influence an average of 0.6 percent of decisions to locate or expand in Virginia.

Declining award amounts per job over time, in particular, could reduce the program's "attractiveness" and further reduce its ability to influence business decisions. VJIP is estimated to have a lower ability than other incentives to sway business location or expansion decisions because of its lower award amount. JLARC's 2018 evaluation of VJIP found, while the grant was not a decisive factor for many business location or expansion decisions, it was important in their decision to train workers and resulted in workforce improvements. At some point, however, the award per job could become so low that the grant application and compliance costs would outweigh its value, particularly for small businesses. Some businesses may be less likely to seek the grant to train and improve their workforce, both of which benefit the state economy, and an incentive with a low value relative to other states will reduce the state's competitiveness.

VJIP meets majority of criteria for effective incentive design but has a low wage threshold and no special provision for distressed areas

VJIP, like other incentive programs administered by VEDP, has many program design features research literature says are needed for effective economic development incentives. VJIP fully meets five of the criteria of effective design and partially meets two of the criteria (Table 1-3). VJIP partially meets the return on investment (ROI) criteria because, while ROI analysis is used to make award decisions, the grant award per job does not vary much among projects. This finding suggests that other factors, such as firm recruitment and training costs, play a more significant role in the size of awards than ROI factors, such as level of capital investment, wages paid, and job creation. The program does not make upfront payments (it distributes grant funds on a reimbursement basis after jobs have been in place for 90 days), but it does have a clawback provision if the minimum capital investment is not achieved.

VJIP does not meet two criteria of effective incentive design. The program's wage requirement is lower than the local prevailing average wage. Research recommends using the local prevailing average wage as a minimum requirement so that new projects do not erode local wage standards. In addition, VJIP has no allowance for economically distressed areas. Preferences for economically disadvantaged areas can improve the social benefits of incentives. Distressed high unemployment areas typically have proportionally more immobile, involuntarily unemployed or underemployed workers, and benefit more from employment rate increases than more economically advantaged areas. The employment of *existing* unemployed and underemployed residents in distressed areas should reduce social service costs while not increasing public infrastructure costs. In contrast, public infrastructure costs are more likely to increase when *new* workers move into an area of relatively high employment to fill jobs. While the program does not officially have these criteria, VJIP staff said that both 1) project wages relative to the local average prevailing wage and 2) the economic conditions of the locality are factored into their application scorecard for determining the award amount.

Incentive research recommends that **projects should pay the local prevailing average wage** or higher. Higher wage jobs are associated with higher multiplier effects: higher wages mitigate the impact of the indirect and induced employment from new projects that are often in lower wage retail trade and service industries.

TABLE 1-3
VJIP meets majority of features of effective incentive design

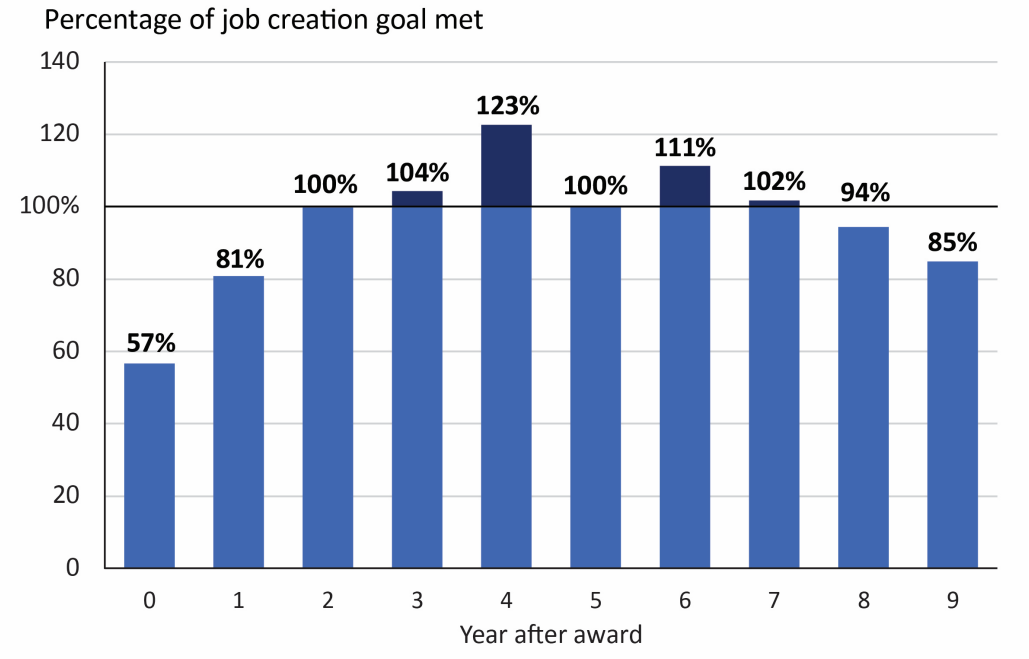
Requirement	VJIP
Minimum eligibility thresholds	●
Due diligence review	●
ROI-based award	◑
Tradable industry	●
Pay average local wage or higher	○
Competitive projects	●
Project/program cap	●
Special provisions to target distressed area	○
Up front awards with performance clawbacks	◑

SOURCE: Weldon Cooper Center review of program documentation and economic development incentive research.
NOTE: Expiration date is not included as a criterion for grant programs because these programs receive annual appropriations and, unlike tax incentives, undergo legislative review during the appropriation process. VJIP allows the minimum wage threshold to be waived in areas with above average unemployment rates, however this is atypical because most programs with allowances reduce rather than waive the minimum threshold for distressed areas.
● Meets criteria ◑ Partially meets criteria ○ Does not meet criteria

VJIP projects collectively met job creation goals

VJIP projects have collectively met their job creation goals. Whether a grant program *collectively* achieves its job creation goal is a key measure of success because it is not reasonable (according to incentive research nationally and in Virginia) to expect every project to meet its goal. Many factors can affect project employment levels, including factors like a downturn in the economy that are outside of a business's control. It is reasonable, however, to expect that some projects will exceed their employment goals so that overall the program meets its employment goal. VJIP projects collectively met reported job creation performance within two years of the grant award (Figure 1-2). The program did not maintain 100 percent employment collectively in years eight and nine of the study period, but this may have been because of the COVID-19 pandemic, at least in part, which resulted in a significant downturn in economic activity for many industry sectors.

FIGURE 1-2
VJIP projects collectively met their job creation goals in year two after the grant award



SOURCE: Weldon Cooper Center analysis of VEDP and VEC data.
NOTE: The program did not maintain 100 percent employment collectively in years eight and nine, in part because of the COVID-19 pandemic, which resulted in a significant downturn in economic activity for many industry sectors. In addition, not all projects had been in place long enough to have employment data eight or nine years after the award. For example, year eight for a project approved in FY14 (beginning of the study period) corresponds with FY22.

VJIP has moderate economic benefits and return in revenue

VJIP is estimated to generate additional economic activity for the state (Table 1-4). VJIP is estimated to have increased private employment by 140 jobs, Virginia GDP by $33 million, and personal income by $16 million each year between FY14 and FY23. This analysis assumes only a portion of the economic activity is attributable to the grants.

These economic benefits and the grant's return in state revenue are moderate compared with other incentives. When assessed per $1 million spent on the grant program, VJIP has moderate economic benefits compared with the economic benefits across other incentives. When assessed per $1 million spent, the program generates an additional 45 private jobs, nearly $10 million in GDP, and $5.1 million in personal income. These benefits are in line with the economic benefits of the average state incentive. The return in state revenue for every $1 spent on VJIP is 42¢, which is also similar to the return in revenue for the average incentive. (See Appendix C for more detail on the comparison of economic benefits and return in revenue generated by Virginia incentives.)

Economic impact analysis of expenditures by incentive recipients was conducted using economic modeling software developed by REMI, Inc.

(See Appendix H [online only] for the economic impact analysis used in this study.)

Net impact is the increase in economic activity induced by the incentive, adjusted for the opportunity cost of increasing taxes to pay for the incentive.

(See online Appendix I for information on the total economic impact and the opportunity cost of increasing taxes.)

Incentives, on average, are estimated to generate an additional 58 jobs, $9 million in GDP, and $5 million on personal income per $1 million spent and have a return in revenue of 41¢ per $1 spent. (See *Economic Development Incentives 2024,* JLARC 2024.)

Because job creation typically has higher impacts than job training for existing employees, the economic impacts differ between the job creation and job training components of the VJIP program. When assessed per $1 million spent, the job creation programs are estimated to generate an additional 54 private jobs, $12 million in Virginia GDP, and $6 million in personal income, compared with the retraining programs, which are estimated to generate only three jobs, $0.6 million in Virginia GDP, and $0.5 million in personal income.

TABLE 1-4
VJIP has moderate economic impacts and moderate return in revenue

	Annual average FY14–FY23
Net impact to Virginia economy	
Private employment	140 jobs
Virginia GDP	$32.7 M
Personal income	$15.7 M
Impact to Virginia economy per $1 million of incentive	
Private employment	45 jobs
Virginia GDP	$10.0 M
Personal income	$5.1 M
Impact to state revenue	
Total revenue	$1.6 M
Incentive awards	$3.7 M
Revenue net of awards	-$2.1 M
Return in revenue	42¢ for every $1 spent

SOURCE: Weldon Cooper Center economic impact analysis of completed projects that received a VJIP award between FY14 and FY23.
NOTE: Includes direct, indirect, and induced impacts Assumes that 0.6 percent of the jobs created by VJIP projects are attributable to the grants. Includes direct, indirect, and induced impacts. The gross impact on Virginia's economy is used to calculate the impact per $1 million for incentive awards and the impact to state revenue. This is consistent with how the economic development research literature typically calculates these impacts. (See Appendix I [online only] for detailed results on total impact of the grants, impact of raising income taxes by the amount of the grant [opportunity cost], and revenue generated by source.)

Economic benefits and the return in revenue are moderate even though only a very small portion of the activity by VJIP-funded projects (0.6 percent) is attributed to the grants. Results are moderate because projects have characteristics of high impact projects. Half of the projects are in the manufacturing sector (a tradable industry sector with high employment multipliers), and some projects pay relatively high wages even though the wage threshold to qualify for the program is low (46 percent of completed projects paid the local prevailing average wage or higher).

Several modifications would improve VJIP's economic benefits to the state

Several changes were made to VJIP based on JLARC's 2018 recommendations to improve its effectiveness and economic benefits. VJIP began using a scoring template for determining the grant award that is similar to the return on investment analysis used

for other VEDP grants, such as the Commonwealth's Development Opportunity Fund (COF), instead of the more informal discretionary method the program had been using. The new scoring template, however, may need additional improvements because the grant award per job has declined over time in real dollars. VEDP staff reported they are in the process of reviewing and revising their award scorecard to ensure that the award amount is appropriate and relevant to current economic conditions. Because of these forthcoming revisions, the award per job amount should increase beginning with projects approved in FY26.

VJIP also began requesting information about new skills, credentials, and wage increases that are expected to result from the retraining activities on the grant application (Recommendations 2 and 3 in *Workforce and Small Business Incentives*, JLARC 2018).

VJIP also adopted other changes to improve the program including

- **Increasing the minimum thresholds for the retraining sub-programs**. The jobs trained and the capital investment thresholds for the retraining sub-programs were increased to the thresholds for the new jobs sub-programs.
- **Moving administration of the program.** Program administration was moved to VEDP's Incentives Division with support from the division on Regional Talent Solutions and Business Outreach in 2022. This placement provides more consistency in compliance and verification practices across VEDP grant programs, and the talent solutions and business outreach unit provides targeted outreach to businesses and localities on their specific needs.
- **Administering a customer satisfaction survey.** The survey is used to better understand program impact and obtain recommendations for program improvement.

Several additional changes would further improve VJIP's effectiveness and economic benefits because they would better align the program with effective incentive design practices and other VEDP programs like COF.

In 2018, the minimum wage for project eligibility was 1.35 times the federal minimum wage ($7.25 per hour) or $9.79.

The General Assembly increased Virginia's minimum wage annually beginning in 2021. Currently, the Virginia minimum wage is $12.41, and the minimum wage for VJIP project eligibility (1.2 times the state or federal minimum wage, whichever is higher) is $14.40.

Set VJIP's minimum wage threshold to the local average prevailing wage, or a percentage of it

The 2018 JLARC evaluation recommended VJIP raise its minimum wage threshold to better target businesses with characteristics of high economic impact, increasing the benefits of the grants (Recommendation 1 in *Workforce and Small Business Incentives*, JLARC 2018). Raising the wage threshold is also consistent with the goal of maintaining regional wage standards and would bring the program's wage requirements into conformity with the job creation incentive programs of other states and other Virginia job creation programs.

VJIP's current minimum eligible wage threshold is statutorily tied to the state and federal minimum wage (1.2 times the state or federal minimum wage, whichever is higher), which has several potential problems

- the threshold is tied to statutory changes in the minimum wage rather than market conditions, which may not reflect wage increases attributable to inflation and increased productivity;
- the threshold is not tied to *local* labor market conditions. A $14.40 eligible wage is below the local average prevailing wage in every Virginia locality, and is less than one-third of the average in some high-income localities; and
- even with Virginia's statutory minimum wage increase in 2026, VJIP's wage threshold will likely lag the average minimum wage established by other state job creation incentive programs, which are often tied to state or local average wages.

Tying VJIP's wage threshold to the local prevailing average wage instead of the minimum wage would increase the wage threshold projects must meet. More importantly, this change would prevent projects that just meet the current VJIP wage threshold ($14.40 per hour, or just under $30,000 per year) from receiving an award if they locate in regions with above average wages and low unemployment, like Northern Virginia (average wage of $65,000 or higher depending on locality), and depressing the region's wages. Tying the wage threshold to local average wages would also be consistent with other Virginia incentive programs such as COF, the Virginia Economic Development Incentive Grant, and the Tobacco Region Opportunity Fund. The standard, however, does not have to be 100 percent of the prevailing average wage like COF. (Only 43 percent of VJIP projects paid 100 percent of the local prevailing average wage during the study period.) For example, the threshold could be set at 80 percent of the local prevailing average wage.

RECOMMENDATION 1

The General Assembly may wish to consider amending § 2.2-2204.3 of the Code of Virginia to tie the wage threshold eligibility for the Virginia Jobs Investment Program for newly created jobs to a percentage of the prevailing average annual wage in the locality. New jobs should pay at least 80 percent of the local prevailing average wage.

Reduce minimum eligibility thresholds for distressed areas

VJIP allows the minimum wage threshold to be waived in areas with above average unemployment rates, but there are no provisions for reducing other eligibility thresholds in distressed areas. Reducing job creation and capital investment thresholds and revising the wage provision to reduce (rather than completely waive) the wage threshold, would better align the program with criteria for effective incentive design. Many other Virginia programs make allowances for economically distressed regions by reducing wage eligibility criteria (e.g., COF requires only 85 percent of local average prevailing wages), reducing job creation qualifications (e.g., the Major Business Facility Job Tax credit drops the job creation threshold from 50 to 25 jobs), decreasing capital investment thresholds, and creating a higher grant amount per eligible job created or

worker trained. The criteria used to designate economically distressed localities for COF could be used for the program.

RECOMMENDATION 2

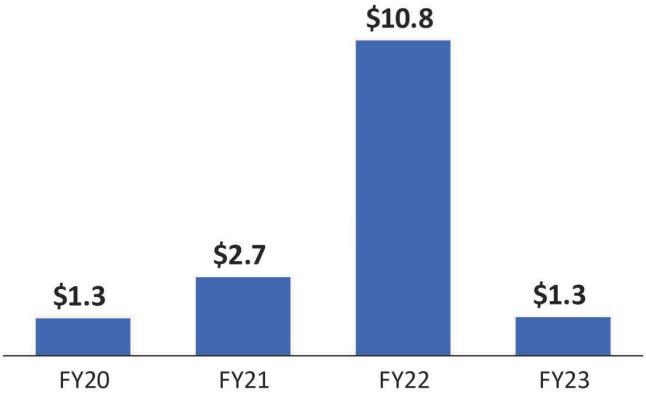
The General Assembly may wish to consider amending § 2.2-2204.3 of the Code of Virginia to allow reductions in minimum eligibility requirements of the Virginia Jobs Investment Program for projects in economically distressed areas of the state.

VIRGINIA TALENT ACCELERATOR PROGRAM

Attract businesses to the state by providing an array of worker recruitment and training services so firms can quickly staff their operations with skilled workers

VALUE TO BENEFICIARIES FY21–FY23

Total spending: $17.3M

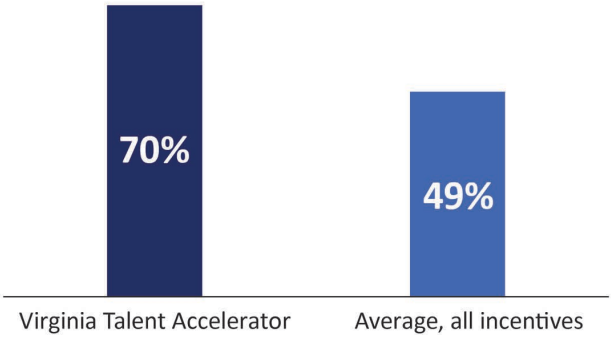


Beneficiaries

Mostly manufacturers and agriculture-related businesses

ACHIEVEMENT OF PURPOSE

Most initial projects would have proceeded as planned without the award



Awardees still report it is useful in helping them to:

- Create new jobs
- Create new or expand current facilities
- Increase economic value of company

IMPACT TO STATE ECONOMY

FY22–FY23

Economic benefit per $1M in grants

Jobs, state GDP, and personal income

Return in revenue

per $1 spent

●●●● High
●●●○ Moderate
●●○○ Low
●○○○ Negligible

2. Virginia Talent Accelerator Program

The Virginia Talent Accelerator Program is a "turnkey" workforce program designed to attract businesses to the state by providing an array of customized recruitment and training services. Businesses receive no funds from the program, only in-kind services, which are at no cost to the business. The program operates on a fast timeline to help businesses quickly staff their operations with skilled workers by providing customized services including recruitment assistance, candidate screening and evaluation, worker onboarding, customized training, and organizational development training (Table 2-1). The Virginia Economic Development Partnership (VEDP) began receiving appropriations in 2019 to develop and staff the program. Virginia and four other states have created customized workforce recruitment and training programs, like the Virginia Talent Accelerator Program, to help address businesses' concerns about the availability of a skilled and ready workforce. (See Appendix D for more information about the customized workforce programs in other states.)

The program is "**turnkey**" because it provides all-inclusive services to provide employers with a "ready-to-work" labor pool.

Projects can use the full array of program services or only some services depending on their needs. VEDP program staff collaborate with businesses to identify and develop the support services that address their specific workforce needs, beginning with a needs assessment that examines business processes, job roles, tasks, culture, and existing recruitment and training resources. The Virginia Talent Accelerator Program has an in-house design and delivery team with private-sector experience that directly provides recruitment and training services. The program occasionally employs temporary consultants for specialized needs and to help with peaks in demand.

The newer Virginia Talent Accelerator Program allows the state to offer a broader array of workforce training services than is available through the older Virginia Jobs Investment Program (VJIP), which is also administered by VEDP. Both programs have a common goal of providing workforce recruitment and training assistance to competitive and tradable sector companies locating and expanding in Virginia. VEDP staff indicate that projects must choose between the two programs rather than receive assistance from both. A primary difference between the programs is that the Virginia Talent Accelerator Program provides customized services directly to businesses, while VJIP provides grant funding to help businesses cover the cost of recruitment and training services. So far, the Virginia Talent Accelerator Program has predominantly served manufacturers and larger businesses, while VJIP recipients are typically smaller and more service-oriented businesses. Businesses receiving Virginia Talent Accelerator Program assistance from FY20 through FY23 had 1,475 employees, on average, at the time of assistance, compared with only 228 for VJIP projects between FY14 and FY23.

TABLE 2-1
Virginia Talent Accelerator Program provides customized workforce services to attract businesses to the state

Purpose	Attract businesses to the state by providing an array of worker recruitment and training services so firms can quickly staff their operations with skilled workers.
Eligible projects	Project must be competitive and in a tradable sector industry Project must create at least 50 jobs within the first year (reduced to 25 jobs for manufacturers or distribution centers). Jobs must pay at least the prevailing average wage of the locality (reduced to 85 percent of the prevailing average wage in distressed localities). Projects must make a "significant" capital investment, but this is not defined. Company is expected to invest time, pay employees during training, and assist in developing the training before the project begins.
Services offered	Recruitment assistance: program staff design and execute recruitment campaigns tailored to the business's needs using strategies that may include digital marketing, advertising, broadcast-quality videos, and local job fairs to attract a wide pool of candidates. Candidate screening and evaluation: program staff assist firms in assessing applicants, including providing skills testing, behavioral interviews, and aptitude evaluations to ensure the right fit for the company. Staff onboarding: program staff assist companies in onboarding new hires, ensuring they are familiar with the business's operations and workplace culture. Customized training programs: program staff develop training programs based on job roles, specialized equipment, company culture, and industry requirements focusing on what new hires need to learn during the first few days or weeks on the job to ensure both employee and employer success during the startup or expansion phase. Training is provided for foundational skills (e.g., soft skills, workplace readiness, basic technical skills, industry-specific knowledge), process-level skills (e.g., manufacturing processes, inventory management), and procedural level skills (e.g., equipment operation, IT systems training). Training content can include hands-on training, simulations, multimedia modules, and instructor-led classroom sessions. Training materials that are developed become the exclusive property of the company. Organizational development programs. The program offers organizational development, operational excellence, and leadership training, as well as consulting services to help companies establish a collaborative culture and optimize individual performance.

SOURCE: Weldon Cooper Center review of agency documents.

Virginia Talent Accelerator Program has provided $17 million in services to 41 projects, most of which are still underway because program is new

The Virginia Talent Accelerator Program has provided customized workforce services to 41 projects between FY20 and FY23 at an estimated cost of $17.3 million. Most projects were still underway in FY23, with nine projects having been completed and seven having been canceled before services were provided. Most (80 percent) of the projects involved manufacturers or controlled environment agriculture facilities. Businesses received customized services from the program valued at an average of $421,000 per project, equating to approximately $1,520 per job, on average. The cost of services per job varied widely by project, from $711 to $2,630, depending on the

extent of customized services provided by the program. The program's cost also varies based on how many companies the program is serving at the same time (serving several companies at a time reduces overhead costs). VEDP staff estimate that the market value of their service is twice what it costs the state.

Virginia Talent Accelerator Program meets most criteria of effective incentive design

The Virginia Talent Accelerator Program meets most of the criteria that research indicates is needed for effective incentive design. Projects must undergo due diligence reviews; be competitive and in tradable industry sectors; and meet local prevailing wage standards. In addition, the program has provisions to target projects in distressed areas (Table 2-2). VEDP staff report that the program is particularly attractive to businesses locating in distressed areas, because it helps address the difficulty of finding workforce recruitment and training services, which are often limited in these areas.

TABLE 2-2:
Virginia Talent Accelerator Program meets most features of effective incentive design

Requirement	Virginia Talent Accelerator Program
Minimum eligibility thresholds	◑
Due diligence review	●
ROI-based award	◑
Tradable industry	●
Pay average local wage or higher	●
Competitive projects	●
Project/program cap	●
Special provisions to target distressed area	●
Upfront awards with performance clawbacks	●

SOURCE: Weldon Cooper Center review of program documentation and economic development research.

The program only partially meets two criteria for effective incentive design.

- The program has minimum wage and job creation requirements, but it lacks specific capital investment requirements. The guidelines state that participants should make "significant" capital investments, but the term "significant" is not clearly defined.
- The funding amount allotted to a project to cover the cost of services is based on project recruitment and training needs instead of return on investment (ROI) considerations. However, because program services are usually combined with other incentive awards, like custom grants, which are based on ROI

criteria, the "award" amount is factored into the overall ROI assessment for the project's total incentive package.

Initial projects would have proceeded without the Virginia Talent Accelerator Program, but stakeholders prefer it to other workforce training incentives

Weldon Cooper Center staff surveyed companies that had received incentives from eight programs and 14 custom grants to assess the importance of incentives on their business performance. The survey was conducted in 2022, and the response rate was 30 percent.

Responses to a 2022 Weldon Cooper Center survey, which was administered two years after the program began, indicated that the Virginia Talent Accelerator Program was not a critical factor in most recipients' decisions to locate or expand in Virginia. Seven out of 10 respondents indicated that they would have proceeded with the project as planned without the program (Figure 2-1). This is a higher percentage than reported by recipients of other location and expansion programs, but it may not fully reflect the program's current impact, because it is only based on survey results from initial projects. VEDP staff believe that if more recent recipients of the program's services were surveyed, a higher proportion would rate it as having an impact on their location or expansion decisions because the program is now more fully developed.

Another reason that the program may not have been considered a critical factor is that many of the respondents received other sizeable incentives, including custom grants (e.g., LEGO received a custom grant of $75 million), that on a per job basis were larger than Virginia Talent Accelerator Program "awards" ($7,600 per job for other grants, including custom grants, compared with $1,520 per job for program awards). However, VEDP staff indicate they view Virginia Talent Accelerator Program awards as differentiators or tipping factors in a firm's final decision to choose Virginia, when they are combined with other awards.

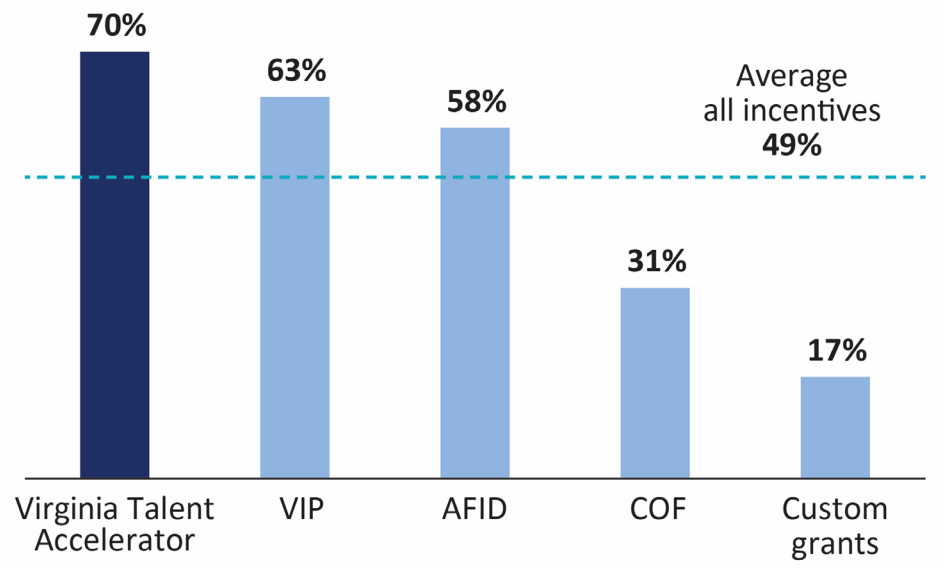
A majority of recipients reported that the program was important in helping their firm create new jobs, expand their current facilities, create new facilities in Virginia, and increase the economic value of the company. Most program recipients indicated they were very satisfied with the recruitment services, but because the program was new and projects had not received or were in the process of receiving training services at the time of the survey, a more comprehensive assessment of the program was not possible.

Businesses and site selection consultants report that "turnkey" customized workforce training incentives, like the Virginia Talent Accelerator Program, are favored over grants and tax incentives for several reasons.

- **Cost savings**. Turnkey programs provide training services at no cost to the business, reducing the upfront investment that is often required by grants or tax credits that provide funding on a reimbursement basis. VEDP staff also report the in-kind services they provide projects are half what it would cost if the project obtained them from a private company.

- **Speed and flexibility**. These programs can respond more quickly than other incentives, particularly for firms that are unfamiliar with Virginia or the U.S. and do not have the human resource capabilities to handle mass trainings at once. The training is provided in-house so businesses do not have to spend time finding training resources on their own, and the training can meet the timeframes businesses need. This training is also more adaptable to changes in training needs if new technologies or processes are introduced.
- **Customization**. These programs are designed specifically to meet the recruitment and training needs of the company, which helps ensure quality and the relevance of the training provided.
- **Long-term relationships with state resources.** In-kind training programs often foster closer relationships with the state than grant programs or tax credits that provide mostly financial assistance. These programs help link companies with a variety of state resources, such as community colleges' workforce training.
- **Enhanced regional competitiveness.** States that have "turnkey" programs have consistently ranked higher than states without them on state workforce development rankings by entities such as CNBC's "Best States for Business" and Area Development's "Top States for Doing Business." VEDP staff indicate the program is also a marketing tool that enables Virginia to differentiate itself from other states.

FIGURE 2-1
Initial Virginia Talent Accelerator Program awardees reported their firm would have proceeded with the project as planned without the award at higher rates than for other grants



SOURCE: Weldon Cooper Center survey of grant award recipients, 2022.
NOTE: AFID=Agriculture and Forestry Industries Development grant; VIP = Virginia Investment Performance grant.

Virginia Talent Accelerator Program has low economic benefits and a moderate return in state revenue

Economic impact analysis of expenditures by incentive recipients was conducted using economic modeling software developed by REMI, Inc.

(See Appendix H [online only] for the economic impact analysis used in this study.)

The Virginia Talent Accelerator Program is estimated to generate minimal additional economic activity for the state, accounting for the offsetting personal income tax revenues required to fund the program (Table 2-3). An estimated 23 jobs, $4 million in Virginia GDP, and $2 million in personal income are added to the Virginia economy per year on average because of the program. The analysis factors in activity for only nine completed projects over two years since the program is new. Therefore, it may not capture the full impacts of the projects over a longer period.

Net impact is the increase in economic activity induced by the incentive, adjusted for the opportunity cost of increasing taxes to pay for the incentive.

(See online Appendix I for information on the total economic impact and the opportunity cost of increasing taxes.)

When assessed per $1 million spent on the program, the economic benefits of the Virginia Talent Accelerator Program are low compared with the economic benefits across other incentives. (See Appendix C for more detail on the comparison of economic benefits generated by Virginia incentives.) The return in state revenue for every $1 spent on the program is moderate (44¢ per $1 spent). If the program's service value is estimated to be twice the cost to the state (as stated by VEDP), the economic benefits are at the high end of the moderate range, and the return in revenue is high (88¢ per $1 spent).

Incentives, on average, are estimated to generate an additional 58 jobs, $9 million in GDP, and $5 million on personal income per $1 million spent and have a return in revenue of 41¢ per $1 spent. (See *Economic Development Incentives 2024,* JLARC 2024.)

TABLE 2-3
Virginia Talent Accelerator Program has low economic benefits to the state and a moderate return in state revenue

	Annual average FY22–FY23
Net impact to Virginia economy	
Private employment	23 jobs
Virginia GDP	$4.5 M
Personal income	$2.3 M
Impact to Virginia economy per $1 million of incentive	
Private employment	32 jobs
Virginia GDP	$6.2 M
Personal income	$3.2 M
Impact to state revenue	
Total revenue	$320,110
Incentive awards	$727,880
Revenue net of awards	-$159,543
Return in revenue	44¢ for every $1 spent

SOURCE: Weldon Cooper Center economic impact analysis of amount of assistance provided FY22–FY23.
NOTE: Includes direct, indirect, and induced impacts. Gross impact on Virginia's economy is used to calculate impact per $1 million in incentive awards and impact to state revenue. This is consistent with how the economic development research literature typically calculates these impacts. (See Appendix I [online only] for detailed results on total impact of the program, impact of raising income taxes by the amount of the program [opportunity cost], and revenue generated by source.)

Minor changes could improve the Virginia Talent Accelerator Program's effectiveness

The Virginia Talent Accelerator Program is fairly new, and program effectiveness could not be fully evaluated since most projects are still underway. However, the program is estimated to have moderate return in state revenue, and, though recipients reported it was not a critical factor for location and expansion decisions, it may help ensure businesses receiving other incentives, such as custom grants, are successful at meeting and maintaining their job creation goals by having trained workers. Several minor improvements to the program could be considered to enhance its alignment with effective incentive design.

Adopt capital investment eligibility requirements

The Virginia Talent Accelerator Program should require that projects meet a minimum capital investment threshold to better align the program with effective incentive design and other Virginia incentives. The program does not currently have a minimum capital investment requirement, though program guidelines suggest that projects must make a "significant capital investment." The program's capital investment thresholds could be set at a level similar to COF or VJIP. (The program's minimum job creation requirements are already similar to these programs.) The capital investment threshold for COF is $5 million for 50 or more new jobs or $100 million if the job creation threshold is reduced to 25 new jobs. VJIP has a minimum capital investment threshold of $1 million. The majority of projects receiving services from the Virginia Talent Accelerator Program would likely meet the COF or VJIP threshold since many received custom or other large grant awards. VEDP staff could analyze the capital investments made by projects that have received assistance to set an appropriate minimum capital investment threshold. Different thresholds could be established depending on whether the project is a new (higher threshold) or an expanding business (lower threshold).

RECOMMENDATION 3

The Virginia Economic Development Partnership staff should analyze the capital investments made by projects that have received assistance from the Virginia Talent Accelerator Program and establish a minimum capital investment threshold for the program.

Virginia Talent Accelerator Program accountability needs to be strengthened

Unlike nearly all other economic development incentive programs, the Virginia Talent Accelerator Program is not specifically authorized or established in the Code of Virginia. The program was initially created with a $2.5 million appropriation to VEDP, and the amount has increased to $9 million annually for FY23 and FY24, putting the program on track to be one of the state's larger grant programs. The budget language for the program references only the appropriation and does not establish any program requirements.

If the General Assembly wishes to continue funding the program, it should establish more formal accountability and transparency. One way to do so would be to establish it in the Code of Virginia. Statute could more clearly define the program's mission, eligibility requirements, and scope. In addition, statute could more formally clarify the relationship of the program with other workforce programs and agencies (e.g., Virginia Works, the Virginia Community College System, and local workforce boards). Alternatively, accountability and transparency could be strengthened by articulating the mission and requirements of the program in the appropriation act.

Provide additional information about the program on the VEDP website

VEDP should add more information on its website about the Virginia Talent Accelerator Program for interested firms, similar to its other programs. Additional information should include local prevailing wages by locality, performance report formats, a sample performance agreement, and other materials.

3. Worker Training Tax Credit

The purpose of the Worker Training Tax Credit is to encourage businesses to train workers, with the purpose of improving productivity and employee retention (Table 3-1). The 2019 General Assembly adopted the worker training tax credit to replace a similar tax credit—the Worker Retraining Tax Credit. JLARC recommended eliminating the previous retraining tax credit in a 2018 evaluation because it was not effective in encouraging businesses to retrain workers (*Workforce and Small Business Incentives*, 2018). Eligibility for the current worker training tax credit is similar to the prior credit, but the value of the credit was marginally increased to make it more attractive. Specifically

- the percentage of reimbursable eligible training expenses increased from 30 percent to 35 percent, and
- the credit per eligible employee was increased from $200 or $300 to $500 (or $1,000 for non-highly compensated workers).

TABLE 3-1
Virginia offers a worker training tax credit to encourage businesses to train workers, which will expire July 2025

Purpose	Encourage worker training to improve productivity and employment retention.
Eligible projects	Businesses train workers through - noncredit courses provided by a Virginia college or other public higher education institution or by other organizations that are on the Eligible Training Provider list maintained at the Department of Workforce Development and Advancement (Virginia Works); - a registered apprenticeship approved by the commissioner of Virginia Works; or - an orientation, instruction, or training program by a Virginia manufacturer for students in grades 6 through 12 related to its manufacturing activities.
Program features	Tax credit amount is equal to 35 percent of the expenses incurred for eligible worker training up to (i) $500 per qualified employee or a(ii) $1,000 for training for a non-highly compensated worker (defined as having income below Virginia's median wage for the year prior to applying for the credit). Nonrefundable, nontransferable credit with a three-year carryover period. Can be claimed against income tax (individual, corporate, or estate and trust), bank franchise tax, and other utility and insurance company taxes. Program cap of $1 million per year.

SOURCE: Weldon Cooper Center review of the Code of Virginia and agency documents.
NOTE: Adopted in 2019 and expires July 1, 2025 (§ 58.1-439.6:1).

The rationale for offering job training tax credits is to

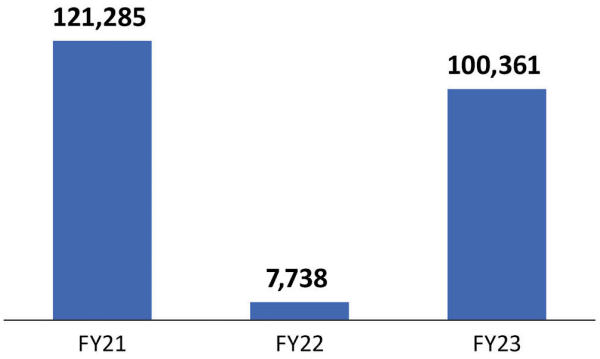
- correct for businesses' tendency to underinvest in training (for fear of newly trained employees being poached by other businesses paying higher wages),

WORKER TRAINING TAX CREDIT

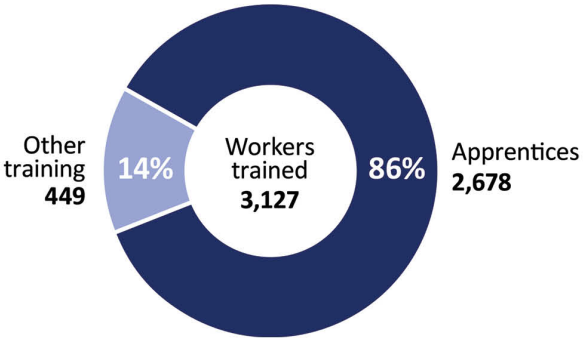
Encourage worker training to improve productivity and employment retention

VALUE TO BENEFICIARIES FY21–FY23

Total tax savings: $229,384



Only 5 companies used the tax credit, mostly for training apprentices



ACHIEVEMENT OF PURPOSE

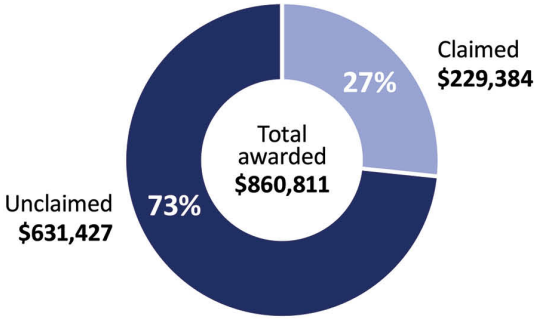
Credit had low use because of low credit amount per job

$500
Worker training tax credit

$2,000
Training incentives, other states

$5,300
Avg. apprenticeship costs (1 yr)

Most of the credit amount awarded has not been claimed



IMPACT TO STATE ECONOMY

FY21–FY23

Economic benefit per $1M in grants

Jobs, state GDP, and personal income

Return in revenue

per $1 spent

●●●● High
●●●○ Moderate
●●○○ Low
●○○○ Negligible

- reduce the social costs of underemployment, and
- improve the economic prospects for lower income and less educated workers.

Virginia is one of 19 states that currently offer job training tax credits. (See Appendix D for more information about training tax credits by state.)

Use of the worker training tax credit has been low

Only five businesses were awarded working training tax credits between FY19 and FY23, and the award amount was far below the annual cap. Only $860,000 was awarded during the timeframe, and annual *awards* have never been more than one-quarter of the annual credit cap of $1 million. The amounts *claimed* on tax returns have been far lower, with just over a quarter of the total amount awarded actually claimed between FY19 and FY23 ($230,000). Although the current tax credit's reimbursement amount per job is higher than the prior tax credit, this has not led to increased use of the credit. The average amount of the current worker training tax credits awarded per year was $172,000 between FY19 and FY23, which is only slightly higher than the average amount awarded per year for the prior tax credit ($162,500 between FY10 and FY17).

The credit's value may be limited by several factors that contribute to its low award and claim amounts. Even though the newer credit's reimbursement rate increased, the credit amount per job ($500 or $1,000) is still lower than the amount per job offered in other states (median of $2,000) and makes up only a small portion of apprenticeship costs (at least $5,300 in the first year). Apprenticeships make up the bulk of the jobs claimed against the credit. Agency staff suggest low usage may stem from low awareness and businesses preferring cash or in-kind incentives.

The low amounts claimed (even after they are awarded) suggest that businesses may not have sufficient tax liability to claim the credit. The credit is nonrefundable and nontransferable and can be carried forward for only three years, which is less than the typical carryforward for tax credits. Businesses also must go through multiple steps to use the credit (obtaining authorization from the appropriate agency, completing tax credit approval forms, providing enrollment and payment documentation, and claiming the credit on tax forms). The administrative costs for small firms likely exceed the value of the credit.

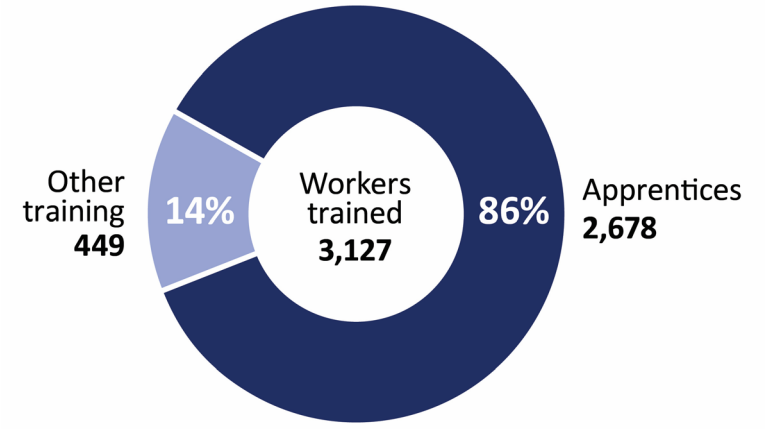
Worker training tax credit is mostly used for apprenticeships but likely has limited influence on apprenticeship rates

The worker training tax credit is used primarily for registered apprenticeship training, with 86 percent of total credit usage supporting 2,678 registered apprentices between tax years 2019 and 2023 (Figure 3-1).

An **apprenticeship** is an organized system of on-the-job training. Workers earn a salary and receive training in return for a contractual commitment to the employer for a designated time period. Training typically is two to four years and involves both supervised on-the-job training and classroom instruction. Completers receive an industry-recognized certificate showing mastery of certain occupational skills.

Registered apprentices, which are eligible for the tax credit, are industry-vetted to ensure they align with industry standards and are approved and validated by the U.S. Department of Labor or a state apprenticeship agency.

FIGURE 3-1
Worker training tax credit is mostly used for apprenticeships (FY21–FY23)



Source: Weldon Cooper Center analysis of worker training tax credit information.
NOTE: No credits were used for manufacturing-related orientation, instruction, and training programs for middle and high school students.

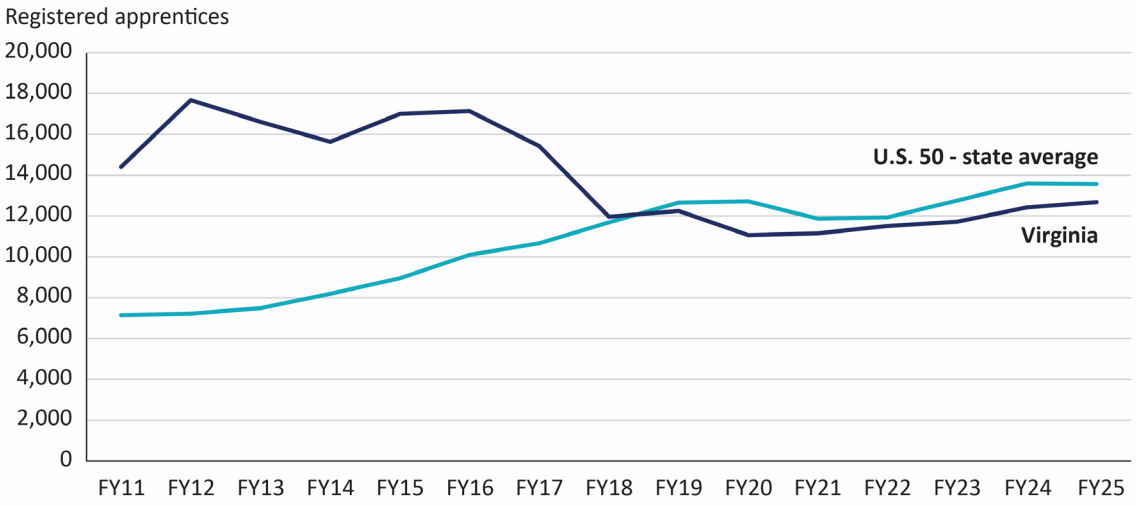
While the worker training tax credit is used mostly for apprenticeships, the credit likely has had minimal impact on the state's apprenticeship rate. The number of registered apprentices in Virginia has decreased over time and is now less than the 50-state average (Figure 3-2) despite the current and previous worker training tax credits. Virginia ranked 32nd in the number of registered apprentices in FY24, with approximately 179 registered apprentices per 100,000 population 18 or older compared with a national rate of 208 per 100,000 population 18 or older.

Research indicates other factors are more influential on the state's apprenticeship rate. Factors that are likely to affect the state's apprenticeship rate more than tax credits include changes in labor demand, labor supply, and workforce or education programs or policies that affect the number of workers with credentials such as community college sub-baccalaureate degrees and certificates. The numbers of new apprentices and the ratio of apprentices to employees also have a cyclical pattern, increasing as business activity and job openings increase.

The strength and focus of a state's apprenticeship program also likely affect a state's apprenticeship rate. State workforce agency directors credit outreach to nontraditional industries for higher apprenticeship rates, and a lack of public knowledge about apprenticeship programs and how to become an apprentice as barriers to apprenticeship growth. Virginia has historically had a more limited apprenticeship program than other states (see JLARC, *Review of Workforce Development*, 2014), which may help explain its lower apprenticeship rate compared with the national average. Virginia's apprenticeship program was administered by the Department of Labor and Industry (DOLI) until recently, and a recent Board of Workforce Development review indicated DOLI was focused on regulations rather than growing apprenticeships to meet the demand among nontraditional users of apprenticeship programs. The new Department of

Workforce Development and Advancement (Virginia Works) has assumed administration of Virginia's apprenticeship program.

FIGURE 3-2
Number of registered apprentices in Virginia has decreased over time and is now less than the 50-state average



SOURCE: Weldon Cooper Center analysis of U.S. Department of Labor apprenticeship data.

Worker training tax credit has negligible economic benefit

The worker training tax credit is estimated to generate no additional economic activity for the state annually, on average, accounting for personal income taxes required to fund the credit. No jobs were added to the Virginia economy, and there is a small loss in Virginia GDP and personal income from the tax credits (Table 3-2). This analysis assumes the credit reduces a firm's production costs by reducing training costs. However, the analysis may underestimate the credit's economic impact because it does not account for potential wage and productivity increases for workers trained because of a lack of data. Research suggests that training programs have considerable wage growth potential for trained workers, so the credit's economic and revenue impact could be higher if the credit stimulated additional training.

When assessed per $1 million spent on the tax credit, economic benefits are negligible compared with the economic benefits across other incentives. (See Appendix C for more detail on the comparison of economic benefits generated by Virginia incentives.) These results are similar to other tax incentives in this report and in prior evaluations, as tax incentives typically have a very low economic impact. The return in state revenue for every $1 spent on the tax credit is also negligible (4¢ per $1 spent), which is also similar to the returns in revenue for other tax incentives.

Incentives, on average, are estimated to generate an additional 58 jobs, $9 million in GDP, and $5 million on personal income per $1 million spent and have a return in revenue of 41¢ per $1 spent. (See *Economic Development Incentives 2024,* JLARC 2024.)

TABLE 3-2
Worker Training Tax Credit has negligible economic benefits to the state

	Annual average FY21–FY23
Net impact to Virginia economy	
Private employment	0 jobs
Virginia GDP	-$90,200
Personal income	-$7,600
Impact to Virginia economy per $1 million of tax credit	
Private employment	7 jobs
Virginia GDP	-$0.1 M
Personal income	$0.7 M
Impact to state revenue	
Total revenue	$3,168
Credit awards	$76,461
Revenue net of awards	-$73,293
Return in revenue	4¢ for every $1 spent

SOURCE: Weldon Cooper Center economic impact analysis of amount of credits claimed FY21–FY23.
NOTE: Includes direct, indirect, and induced impacts. Estimates do not consider increases in wages and productivity that trained employees that qualified for the credit may have generated. Estimates reflect additional economic activity resulting from reducing businesses' production costs by the amount of the credit and increasing the sales of educational services providers. Gross impact on Virginia's economy is used to calculate impact per $1 million in incentive awards and impact to state revenue. This is consistent with how the economic development research literature typically calculates these impacts. (See Appendix I [online only] for detailed results on total impact of tax credit, impact of raising income taxes by the amount of the credit [opportunity cost], and revenue generated by source.)

Economic impact analysis of expenditures by incentive recipients was conducted using economic modeling software developed by REMI, Inc.

(See Appendix H [online only] for the economic impact analysis used in this study.)

Net impact is the increase in economic activity induced by the incentive, adjusted for the opportunity cost of increasing taxes to pay for the incentive.

(See online Appendix I for information on the total economic impact and the opportunity cost of increasing taxes.)

Worker training tax credit will expire in 2025 and should not be reinstated, but a new apprenticeship grant could be considered

The worker training tax credit expires July 1, 2025. The credit had low utilization and negligible economic benefits; therefore, it is reasonable for the state to have allowed the tax credit to expire. If Virginia wants to maintain a state-supported workforce training program, it should not reinstate the credit but instead adopt a grant program focused on incentivizing apprenticeships. A state-funded apprenticeship incentive would show businesses the state values workforce development and would keep Virginia in line with other states that have worker training or apprenticeship incentives.

Adopting an apprenticeship grant could be beneficial for two reasons. A grant is more usable than a non-refundable, non-transferable tax credit because the business would not need tax liability to use the grant. In addition, responsibility for administering the grant could be given to an agency with an apprenticeship focus, such as Virginia Works, to better market and increase awareness of the program, which would further strengthen the apprenticeship system in Virginia. Virginia Works was created in 2023 to consolidate workforce development programs into one agency, and the registered apprenticeship program transitioned from DOLI to Virginia Works. Virginia Works could incorporate marketing and outreach of the new state-funded apprenticeship grant with the marketing and outreach of its existing apprenticeship and workforce-

related programs. Virginia Works staff indicate that Virginia apprenticeships have increased since the agency assumed responsibility for the state apprenticeship program.

If the state created an apprenticeship grant program, it should include several features to overcome the deficiencies of the tax credit. The grant should be targeted to apprenticeships in "nontraditional" fields where they are not already well established but skilled workers are in high demand. The apprenticeship grants could also be targeted to disadvantaged individuals or underrepresented populations.

Such a grant program would complement two apprenticeship programs created in Virginia recently, which have received federal grant funding. The state received nearly $1 million in federal funding in 2023 and created the HIRED Apprenticeship Fund administered by Virginia Works to expand registered apprenticeship programs to fields that have not traditionally used apprentices, such as clean energy, early childhood education, teacher education, and other emerging industries. In addition, the Virginia Manufacturers Association received federal funding to expand the number of registered apprenticeships, including for underrepresented populations, in target supply chain sectors within advanced manufacturing.

The reimbursement rate for the apprenticeship grant should be higher than the reimbursement for the credit. The base reimbursement for the tax credit ($500 or $1,000 per worker) was a relatively small portion of apprenticeship expenses ($5,300) and is unlikely to incentivize apprenticeship adoption, particularly for industries and occupations that typically do not use apprenticeship programs. Virginia could increase its reimbursement to that provided by other states, which is 50 percent of eligible training costs (compared with 35 percent for the tax credit), with a maximum credit of $2,000 per worker trained.

4. Industry Tax Exemptions

Virginia provides tax exemptions to multiple industries or their customers to support the industry or achieve other tax purposes, and seven of these exemptions are evaluated in this report (Table 4-1). Some of the exemptions are provided to the industry directly, such as the high-speed electrostatic duplicators exemption for small-scale printing and photocopying businesses. Other exemptions, like the contractor temporary storage exemption, benefit the construction materials industry but are used by specific construction industry customers (contractors that use the materials out of state). Most of these exemptions have been around for decades, though the controlled environment agriculture exemption was adopted recently.

Evaluations of **other industry sales tax exemptions** can be found in the following reports: *Science and Technology Incentives, Trade and Transportation Incentives, Data Center and Manufacturing Incentives*, and *Film Incentives.*

jlarc.virginia.gov/econdevelopment.asp

TABLE 4-1
Virginia offers seven industry exemptions that are reviewed in this report

Exemption	Purpose	Description
Certain printed materials for out-of-state distribution *Adopted 1976*	Encourage purchases of selected printing materials from Virginia printers enabling them to be more competitive with out-of-state printers.	Tax exemption for purchases by direct mail or marketing companies, advertisers, or other firms of printed materials like catalogs, letters, brochures, and reports, and paper furnished to a printer for fabrication into printed materials. To qualify, the printed materials cannot be stored in Virginia for more than a year and must be distributed out of state.
Contractor temporary storage exemption *Adopted 1989*	Promote competitiveness of Virginia construction material suppliers with out-of-state suppliers.	Tax exemption for construction materials purchased by a contractor for use solely in another state or a foreign country when it is temporarily stored in Virginia prior to shipment out of state. The exemption applies only if the materials could be purchased tax free in another state or country.
Controlled environment agriculture exemption *Adopted 2023*	Promote growth of indoor, closed, controlled-environment commercial agricultural facilities, such as indoor vertical farms and greenhouses.	Tax exemption for controlled environmental agriculture enterprises for purchases of items needed to create, support, and maintain the necessary growing environment for plants, including internal, external, and structural components or materials for growing agricultural products.
High-speed electrostatic duplicators exemption *Adopted 1986*	Promote small-scale printing and photocopying businesses by providing exemption comparable to industrial printers.	Tax exemption for printing or copying companies that purchase or lease high-speed electrostatic duplicators or any other duplicators with a printing capacity of 4,000 impressions or more per hour and are engaged primarily in printing or photocopying products for sale or resale.
Out-of-state nuclear facility repair exemption *Adopted 2000*	Promote Virginia nuclear maintenance and repair businesses by exempting purchases of supplies used to provide services to facilities outside the state.	Tax exemption for nuclear maintenance and repair companies for materials purchased in Virginia and used or consumed to provide services to out-of-state nuclear power plants licensed by the Nuclear Regulatory Commission.

Exemption	Purpose	Description
Taxi parts and radios exemption *Adopted 1984*	Encourage commercial taxi operations and prevent their further decline.	Tax exemption for taxicab operators for parts, tires, meters, and dispatch radios sold or leased and used for their services.
Uniform rental and laundry business exemption *Adopted 1980*	Promote the commercial uniform rental industry by providing a tax exemption similar to other industrial manufacturers and processors.	Tax exemption for commercial uniform rental and laundry companies for purchases of machinery, tools, supplies, and materials like industrial washing machines, dryers, and ironing equipment used directly in laundering, maintaining, and preparing uniforms, towels, and linens that are rented or leased.

SOURCE: Weldon Cooper Center analysis of Code of Virginia and other documents.
NOTE: See Appendix F for more information about each exemption.

Sales tax exemptions are often adopted to incentivize economic activity (by reducing costs for businesses to enhance their competitiveness) but also for other reasons. Many of the industry sales tax exemptions evaluated in this report are not purely economic development incentives but were created to respond to unique industry characteristics and challenges (Table 4-2). Some exemptions were created for shrinking industries facing technological or other competitive challenges, such as the printed materials industry. Some are provided to bring the tax treatment of the industry in line with the tax treatment of similar industries, such as the controlled environment agriculture industry. Other exemptions, like the out-of-state nuclear repair exemption, address gaps in interstate commerce by not taxing goods that are purchased in Virginia but ultimately used out of state. All of these tax exemptions help rectify economic inefficiencies associated with taxing intermediate goods and service purchases, reducing the tax pyramid effect (i.e., when a good is taxed multiple times through its production process).

TABLE 4-2
Virginia's industry exemptions were adopted for more than just economic development reasons

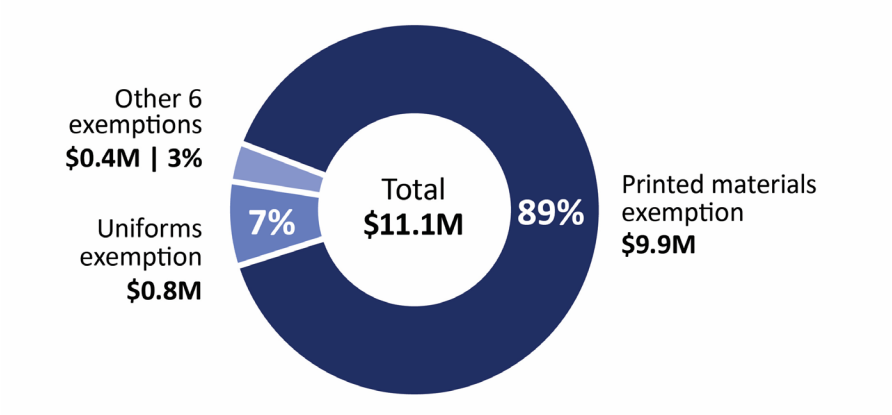
	Adopted to ...			
Exemption for	enhance/preserve competitiveness of industry	provide tax parity with other industries	facilitate interstate commerce	prevent taxation of intermediate inputs
Certain printed materials for out-of-state distribution	✓		✓	✓
Contractor temporary storage	✓		✓	✓
Controlled environment agriculture	✓	✓		✓
High-speed electrostatic duplicators	✓	✓		✓
Out-of-state nuclear repair facilities	✓		✓	✓
Taxi parts and radios	✓	✓		✓
Uniform rental and laundry businesses	✓	✓		✓

SOURCE: Weldon Cooper Center analysis of Code of Virginia and other documents.

Nearly all of the $11 million in annual savings from the industry exemptions is because of the printed materials exemption

Industry exemptions provided $11 million in tax savings to businesses per year, on average, between FY14 and FY23. Nearly all of the tax savings came from the exemption for certain printed materials for out-of-state distribution (printed materials exemption) (Figure 4-1). The exemption for uniform rentals and laundry businesses (uniforms exemption) is estimated to have generated the next largest amount of savings. The savings from the other exemptions are relatively minimal because the related industries are small. For example, only a small number of businesses in Virginia provide design, repair, and maintenance services for nuclear energy facilities and could potentially claim the out-of-state nuclear facility repair exemption (nuclear repair facilities exemption), which was estimated to have tax savings of only $178,000 in FY23.

FIGURE 4-1
Nearly all of the annual tax savings from the industry exemptions is from the printed materials exemption (FY14—FY23)

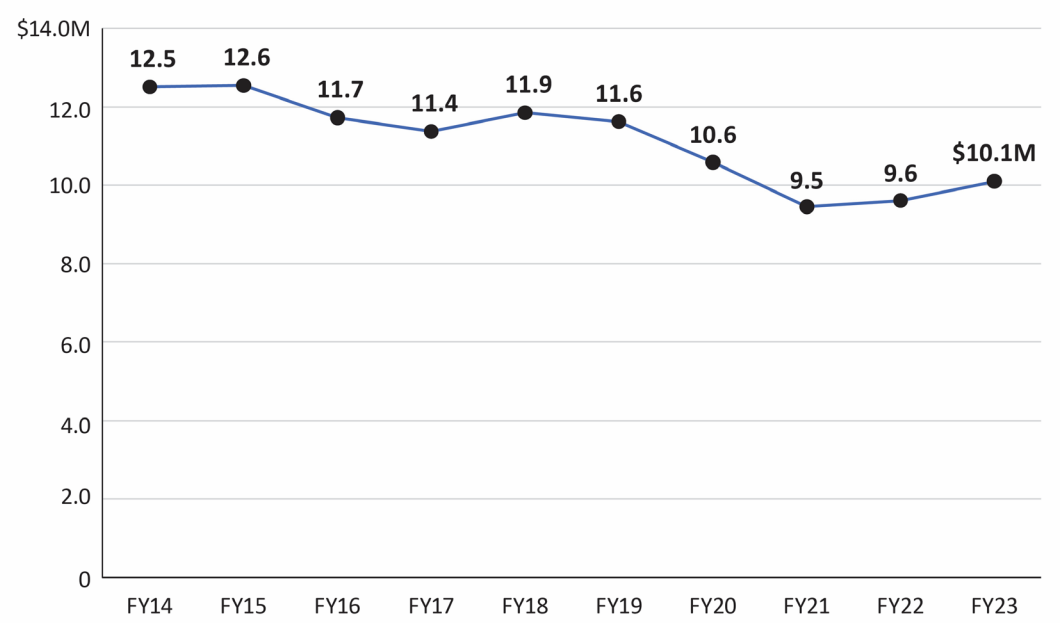


SOURCE: Weldon Cooper Center estimates.
NOTE: Controlled environment agriculture was not claimed until after FY23 and is not included.

Spending on the industry exemptions is estimated to have declined during the 10-year study period (Figure 4-2). This decline occurred because most of these exemptions are for industries that are shrinking because of technological and competitive factors—particularly the printed materials exemption, which had the largest tax savings and the largest decline in tax savings during the study period (20 percent or $2 million decline). Print media have lost their market share with the growth of the internet, e-marketing, social media, and AI, according to industry market research. Though a much smaller exemption, the taxicab parts exemption (tax savings of $111,000 in FY23) has also declined as ride-hailing services, such as Uber and Lyft, which do not qualify for the exemption, have taken much of their market share.

Only two of the industry exemptions are in growing or potentially growing industries. The controlled environment agriculture sector is currently small compared with outdoor production, but it is growing rapidly in the U.S. and Virginia. The nuclear industry had been shrinking because of competition with lower cost fossil fuel and renewable energy sources, but interest in the industry was rekindled recently because of international efforts to lower carbon emissions and to satisfy the rising electricity demands of data centers, manufacturing industries, and electric vehicles.

FIGURE 4-2
Tax savings from industry tax exemptions declined between FY14 and FY23



SOURCE: Weldon Cooper Center estimates of industry sales tax exemptions.
NOTE: Estimated tax savings are not inflation adjusted.

Industry exemptions meet few criteria for effective incentive design

Tax exemptions are usually **"by right" incentives** because businesses can use them automatically if they meet the eligibility criteria.

The industry sales tax exemptions meet few criteria for effective incentive design. However, this may not be problematic for exemptions primarily intended to improve tax policy rather than encourage economic development. Tax exemptions typically do not meet some criteria, partially because of the following common sales tax design features:

- Sales tax exemptions are generally "by-right" rather than discretionary and do not undergo due diligence reviews prior to being awarded.
- Exempted amount is equal to the amount of sales taxes that would have otherwise been paid rather than based on a return on investment analysis.
- Because they are by-right, they do not require businesses to pay above local wages, create a minimum number of jobs, or make a minimum amount of capital investment to be eligible.

In addition, the industry exemptions are only somewhat targeted to high impact industries. Four of the exemptions are targeted to businesses in tradable industry sectors (printed materials exemption, contractor temporary storage exemption, controlled environment agriculture exemption, and the nuclear facility repair exemption), while other industries (such as taxicabs and uniform rental companies) provide primarily

local goods and services. None of the exempted industries are in sectors with high employment multipliers.

Only one industry exemption—the printed materials exemption—has an expiration date. All tax exemptions, regardless of purpose, should have an expiration date, which trigger reviews to help policymakers decide whether to extend or discontinue them.

Industry exemptions have negligible or low economic benefits and returns in revenue

Incentives, on average, are estimated to generate an additional 58 jobs, $9 million in GDP, and $5 million in personal income per $1 million spent and have a return in revenue of 41¢ per $1 spent.

Exemptions, on average, are estimated to generate an additional 20 jobs, $3 million in GDP, and $2 million in personal income per $1 million spent and have a return in revenue of 17¢ per $1 spent (excluding the data center exemption, which has a higher economic impact). (See *Economic Development Incentives 2024,* JLARC 2024.)

The industry exemptions generally are estimated to generate minimal additional economic activity, and in some cases economic losses, for the state, accounting for the offsetting personal income taxes required to fund them (Table 4-3). Lowering personal income taxes would have similar or more beneficial economic impacts than offering these industry exemptions. Of six exemptions, the uniforms exemption is estimated to generate the highest additional economic activity, with 17 jobs, $0.7 million in Virginia GDP, and $1 million in personal income added to the Virginia economy per year on average. The printed materials exemption resulted in the largest economic losses, with an estimated loss of two jobs and $2 million in personal income per year on average. The controlled environment agriculture exemption was not included in this analysis because the exemption is too new.

When assessed per $1 million spent on the exemptions, the economic benefits of the industry exemptions are generally negligible compared with the economic benefits across other incentives. The return in state revenue for every $1 spent on the tax exemptions is also generally negligible compared with other incentives. (See Appendix C for more detail on the comparison of economic benefits generated by Virginia incentives.) These results are also lower than the impacts from the average sales tax exemption, which tend to be lower than other types of incentives such as grants. Only two industry exemptions—the taxi parts and uniforms exemption—are estimated to have both low rather than negligible economic benefits per $1 million spent and returns in revenue per $1 spent.

TABLE 4-3
Virginia's industry exemptions have negligible to low economic benefits and returns in state revenue (annual average, FY14–FY23)

	Printed materials exemption	Contractor temporary storage exemption	Electrostatic duplicators exemption	Nuclear repair facilities exemption	Taxi parts exemption	Uniforms exemption
Net impact to Virginia economy						
Private employment	-2 jobs	1 job	0 jobs	0 jobs	2 jobs	17 jobs
Virginia GDP	$15,910	-$60,552	-$8,645	-$115,649	$34,151	$689,256
Personal income	-$1,969,576	$88,870	-$1,353	$193	$112,308	$1,015,329
Impact to Virginia economy per $1 million of spending on incentives						
Private employment	8 jobs	17 jobs	7 jobs	9 jobs	29 jobs	28 jobs
Virginia GDP	$1,130,131	$599,134	-$16,918	$307,667	$1,402,810	$1,950,813
Personal income	$687,746	$1,657,358	$693,249	$876,014	$1,848,028	$2,099,447
Impact on state revenue						
Total revenue	$489,162	$11,232	$261	$6,919	$12,806	$86,175
Spending on incentives	$9,944,726	$113,708	$7,423	$140,055	$116,801	$840,128
Net revenue	-$9,698,520	-$102,476	-$7,162	-$133,136	-$103,995	-$753,953
Return in revenue	5¢	10¢	4¢	5¢	11¢	10¢

SOURCE: Weldon Cooper Center economic impact analysis of business activity induced by Virginia's economic development incentive programs between FY14 and FY23.
NOTE: Includes only direct, indirect, and induced impacts of completed projects. The gross impact on Virginia's economy is used to calculate the impact per $1 million per incentive awards and the impact to state revenue. This is consistent with how the economic development research literature typically calculates these impacts.

Need for Virginia's industry exemptions should be further assessed, and several actions could improve the exemptions

The industry exemptions assessed in this report are not adopted exclusively, or in some cases primarily, to increase economic activity. Many are adopted to address other issues, such as good tax policy principles. Even though they do not meet many of the criteria for effective incentive design and have negligible to low economic benefits, they may still serve other worthwhile purposes.

The Joint Subcommittee to Evaluate Tax Preferences, which focuses on tax policy rather than economic development, should review the industry exemptions to weigh the revenue and economic impacts of the exemptions with the other benefits they may provide, such as tax parity with other industries. In addition to having economic and tax policy benefits, some exemptions may also have other benefits. For example, a taxicab industry representative indicated that much of its current ridership is centered on providing essential services to seniors, people with disabilities, and others with fixed or low incomes that are not well served by ride-hailing services and public transit.

Ultimately, the purpose of the subcommittee's review should be to identify exemptions that should be eliminated or revised. For exemptions that are continued, the subcommittee should establish a policy on the timeframe for extending them. Extending them for at least five but no more than 10 years may be more reasonable.

RECOMMENDATION 4

The Joint Subcommittee to Evaluate Tax Preferences may wish to consider reviewing, under its authority in § 30-338 of the Code of Virginia, the exemptions for 1) certain printed materials for out-of-state distribution, 2) contractor temporary storage, 3) controlled environment agriculture, 4) high-speed electrostatic duplicators, 5) out-of-state nuclear facility repair, 6) taxi parts and radios, and 7) uniform rental and laundry businesses. The review's purpose should be to determine whether these exemptions are meeting worthwhile needs other than economic development and whether they should be maintained, eliminated, or revised.

An expiration date should be assigned to each of the industry tax exemptions. The printed materials exemption is the only one with an expiration date. Incentive evaluators consider expiration dates a best practice because they encourage additional data collection and frequent impact estimates, which improve transparency about the incentive's impact. Regular reviews increase accountability and ensure that the incentive is still relevant and meeting its goals. Regular reviews can also identify incentives that should be updated, redesigned, reduced, or eliminated.

The expiration date for these exemptions should be prior to June 30, 2030, to align with the policy established in the appropriation act for other Virginia tax incentives (including exemptions), and it could be set to correspond with the expiration of the printed materials exemption (July 1, 2028). The appropriation act also requires that Virginia Tax provide updated revenue estimates no later than November 1, 2025, and every five years thereafter, for tax incentives set to expire within two years following the date of the report. These revenue estimates are provided to the General Assembly and the Joint Subcommittee to Evaluate Tax Preferences.

RECOMMENDATION 5

The General Assembly may wish to consider amending the Code of Virginia to adopt expiration dates for the exemptions for 1) contractor temporary storage, 2) controlled environment agriculture, 3) high-speed electrostatic duplicators, 4) out-of-state nuclear facility repair, 5) taxi parts and radios, and 6) uniform rental and laundry businesses.

Virginia Tax should develop new estimates of business tax savings, especially for the three exemptions targeted at out-of-state purchasers—the contractor temporary storage exemption, the printed materials exemption, and the nuclear repair facilities exemption. Recent tax estimates for these exemptions are either unavailable (existing estimates were generated in 2000 or earlier and inflation adjusted) or rely on incomplete secondary data. The population using these exemptions is likely fairly small, so a

survey-based approach may be economical and provide more accurate information than secondary data from associations, for example. This survey could be based on user information submitted on exemption certificates that have to be filed with Virginia Tax.

RECOMMENDATION 6

The Virginia Department of Taxation should develop new estimates of business tax savings for the exemptions for 1) contractor temporary storage, 2) certain printed materials for out-of-state distribution, and 3) out-of-state nuclear repair facilities.

Appendix A: Study mandate

2024–2026 Appropriation Act
Passed as Chapter 725 of the Acts Assembly, May 2, 2025

§ 1-14 Item 25 E

E.1. The General Assembly hereby designates the Joint Legislative Audit and Review Commission (JLARC) to conduct, on a continuing basis, a review and evaluation of economic development initiatives and policies and to make such special studies and reports as may be requested by the General Assembly, the House Appropriations Committee, or the Senate Finance Committee.

2. The areas of review and evaluation to be conducted by the Commission shall include, but are not limited to, the following: (i) spending on and performance of individual economic development incentives, including grants, tax preferences, and other assistance; (ii) economic benefits to Virginia of total spending on economic development initiatives at least biennially; (iii) effectiveness, value to taxpayers, and economic benefits to Virginia of individual economic development initiatives on a cycle approved by the Commission; and (iv) design, oversight, and accountability of economic development entities, initiatives, and policies as needed.

3. For the purpose of carrying out its duties under this authority and notwithstanding any contrary provision of law, JLARC shall have the legal authority to access the facilities, employees, information, and records, including confidential information, and the public and executive session meetings and records of the board of VEDP, involved in economic development initiatives and policies for the purpose of carrying out such duties in accordance with the established standards, processes, and practices exercised by JLARC pursuant to its statutory authority. Access shall include the right to attend such meetings for the purpose of carrying out such duties. Any non-disclosure agreement that VEDP enters into on or after July 1, 2016, for the provision of confidential and proprietary information to VEDP by a third party shall require that JLARC also be allowed access to such information for the purposes of carrying out its duties.

4. Notwithstanding the provisions of subsection A or B of § 58.1-3 or any other provision of law, unless prohibited by federal law, an agreement with a federal entity, or a court decree, the Tax Commissioner is authorized to provide to JLARC such tax information as may be necessary to conduct oversight of economic development initiatives and policies.

5. The following records shall be excluded from the provisions of the Virginia Freedom of Information Act (§ 2.2-3700 et seq.), and shall not be disclosed by JLARC:

(a) records provided by a public body as defined in § 2.2-3701, Code of Virginia, to JLARC in connection with its oversight of economic development initiatives and policies, where the records would not be subject to disclosure by the public body providing the records. The public body providing the records to JLARC shall identify the specific portion of the records to be protected and the applicable provision of the Freedom of Information Act or other provision of law that excludes the record or portions thereof from mandatory disclosure.

(b) confidential proprietary records provided by private entities pursuant to a promise of confidentiality from JLARC, used by JLARC in connection with its oversight of economic development initiatives and policies where, if such records are made public, the financial interest of the private entity would be adversely affected.

6. By August 15 of each year, the Secretary of Commerce and Trade shall provide to JLARC all information collected pursuant to § 2.2-206.2, Code of Virginia, in a format and manner specified by JLARC to ensure that the final report to be submitted by the Secretary fulfills the intent of the General Assembly and provides the data and evaluation in a meaningful manner for decision-makers.

7. JLARC shall assist the agencies submitting information to the Secretary of Commerce and Trade pursuant to the provisions of § 2.2-206.2, Code of Virginia, to ensure that the agencies work together to effectively develop standard definitions and measures for the data required to be reported and facilitate the development of appropriate unique project identifiers to be used by the impacted agencies.

8. The Chairman of JLARC may appoint a permanent subcommittee to provide guidance and direction for ongoing review and evaluation activities, subject to the full Commission's supervision and such guidelines as the Commission itself may provide.

9. JLARC may employ on a consulting basis such professional or technical experts as may be reasonably necessary for the Commission to fulfill its responsibilities under this authority.

10. All agencies of the Commonwealth shall cooperate as requested by JLARC in the performance of its duties under this authority.

Appendix B: Research methods and activities

JLARC contracted with the University of Virginia's Weldon Cooper Center for Public Service (Weldon Cooper Center) for this review. Key research activities performed by Weldon Cooper Center for this study included

- collection and analysis of national-and state-level financial and economic data and state agency incentive program data;
- analysis of industry characteristics targeted by program;
- program employment performance tracking;
- quantitative analysis of the economic and fiscal impacts of incentives using a dynamic economic model (see Appendix I [online only]);
- interviews with state and local agencies; and
- review of documents, reports, and literature.

Collection and analysis of national- and state-level financial and economic data and state agency incentive program data

This report drew on several federal, state, private industry, and other sources of economic data (Table B-1). Some of this data was used primarily for descriptive purposes, including to highlight trends in state economic performance measures for employment and training that the economic incentives attempt to influence. Information from state agencies, including the Virginia Economic Development Partnership, Virginia Tax, and Virginia Department of Agriculture and Consumer Services, was used for both descriptive and analytical purposes. First, project-level information was aggregated to show characteristics and features of the various programs, including metrics such as average wage rates. Second, agency data was used in combination with other data such as confidential Virginia Employment Commission (VEC) Quarterly Census of Employment and Wages (QCEW) payroll employment records and IMPLAN data to conduct economic analysis. Third, estimates were made of the state government tax revenue impacts of each industry tax exemption using federal, state, and private industry data elements. These analyses are described further below under the rubric of: (a) targeting analysis, (b) employment performance tracking, (c) revenue impact estimation, and (d) firm survey.

TABLE B-1
Data used for this study

Data source	Description of data	Analysis
National and state employment and economic data		
Bureau of Labor Statistics	Quarterly Census of Employment and Wages (QCEW)	Characterize employment trends for controlled environment agriculture (CEA) and taxi service industries.

Data source	Description of data	Analysis
Lightcast™	Industry employment trends for commercial printing, direct mail advertising, other business services, and industrial laundry and linen supply industries.	Characterize employment trends at the state and national levels.
U.S. Department of Labor, Office of Apprenticeship	Number of active and new apprentices	Calculate state and national registered apprentice rates.
Virginia incentive programs		
Department of Motor Vehicles	Number of taxi plates issued	Use in estimating state tax revenue impact of taxi parts and radio exemption.
Virginia Department of Agriculture and Consumer Services (VDACS)	List of Controlled Environment Agriculture (CEA) firms located in the state	Use for estimating state tax revenue impact of CEA exemption
Virginia Economic Development Partnership (VEDP)	Fiscal year budget data	Compare trends in budget allotments for VJIP and Virginia Talent Accelerator Program.
Virginia Tax	Tax credit utilization	Computation of tax credit usage by fiscal year for worker training tax credit.
Virginia Tax	Information from Workforce Training Tax Credit (WTC) application	Tabulate use of funding for apprenticeships versus other training.
Virginia Taxicab Association	Average spending on eligible taxi parts and radio exemption products	Use in estimating state tax revenue impact of taxi parts and radio exemption.
Other		
Annual State Tax Revenue, Census of Government	State tax revenue by tax category and fiscal year	Tax revenue impact analysis.
REMI PI+	Demand by industry, GDP, personal income, and transfer receipts by year	Tax revenue impact analysis.
IMPLAN	Regional SAM Balances, institution industry demand, regional employment multipliers, study area industry data	Computation of export orientation and multipliers for incentive programs.

Data source	Description of data	Analysis
U.S. Census Bureau	Economic Census, Industry by product	State government tax revenue estimate for Certain Printed Materials for Out-of-State Distribution Exemption
Virginia Employment Commission	Quarterly Census of Employment and Wages (QCEW) payroll employment records	Track VJIP employment performance

SOURCE: Weldon Cooper Center.

Program industry targeting characteristics

Data on location and industry of awarded projects was joined with industry economic information (employment multipliers and export information) to identify how well projects were targeted at those likely to have the greatest economic impact. Project industry codes provided by the program were matched with economic information from IMPLAN using IMPLAN codes and an NAICS/IMPLAN code crosswalk to assess the export orientation and industry multiplier magnitude of projects.

The workforce development programs covered in this report benefit tradable and high multiplier industries (Table B-2). For example, the Virginia Talent Accelerator Program has the highest employment multiplier at 2.72 and the largest out-of-state sales share (67.4 percent) because it targets competitive, tradable industries that pay relatively high wages (qualifying projects must pay at least 100 percent of local average prevailing wages unless they are located in distressed localities). VJIP and the worker training tax credit also have similar characteristics. However, industry tax exemptions sometimes lack one or both of these properties. Many target industries that provide primarily local goods or services and/or have relatively low economic multipliers.

TABLE B-2
Workforce incentives tend to target tradable sectors with high employment multipliers

Program	Employment multiplier	Percentage exported	NAICS Sectors (IMPLAN)
Workforce incentives			
Virginia Talent Accelerator Program	2.72	67.4%	Industries of grant awards
Virginia Jobs Investment Program	2.27	56.5	Industries of grant awards
Worker Training Tax Credit	2.19	68.6	Industries of tax credit awards
Industry exemptions			
Certain printed materials for out-of-sate distribution exemption	1.72	100.0*	NAICS 541810 (Advertising, public relations, and related services) and NAICS 323111 (Printing)

Program	Employment multiplier	Percentage exported	NAICS Sectors (IMPLAN)
Out-of-state nuclear facility repair exemption	1.58	100.0*	NAICS 811310 (Commercial and industrial machinery and equipment repair and maintenance)
Contractor temporary storage exemption	1.54	100.0*	NAICS 49314 (Warehousing and storage)
High-speed electrostatic duplicators exemption	1.43	17.5	NAICS 561439 (Business support services)
Controlled environment agriculture exemption	1.32	78.7	NIACS 11141 (Greenhouse, nursery, and floriculture production)
Taxi parts and radios exemption	1.26	50.4	NAICS 485310 (Transit and ground transportation)
Uniform rental and laundry businesses exemption	1.34	3.7	NAICS 81331-2 (Personal and laundry services)

SOURCE: IMPLAN and Weldon Cooper Center analysis of economic development incentive records
* Percentage exported based on exemption targeting.

VJIP employment performance tracking

A before-after analysis of program project performance using employment data from VEC employment payroll records was done to examine program-level and project-level employment performance in the year immediately and years after awards were made for the VJIP program. While job creation is a goal of the Virginia Talent Accelerator Program, employment is not tracked the same way as for other programs.

Records matching

Program project records for FY14–FY23 were matched with 2007–2023 quarterly VEC QCEW payroll employment data using FEIN (Federal Employer Identification Number), company name, company location, and NAICS industry information provided by VEDP. The FEIN is a unique nine-digit number that identifies a firm for federal tax purposes. Since firms often have multiple branch locations, a firm-level identifier is not adequate to identify a particular plant or establishment that benefited from an economic development incentive. FEIN information, when available, was used in conjunction with other available project record information such as firm name, street and P.O. box address, and industry code to identify the specific facility using unemployment insurance account (UIACCOUNT) and reporting unit (REPTUNT) identifiers from the QCEW data. If multiple establishments were co-located, the largest establishment employment record was selected. It cannot be ruled out that some mismatches occurred because of this procedure. Mismatches were most likely to occur for large, complex firms, with fragmented tax reporting involving multiple federal tax and unemployment insurance accounts. The total match rate for VJIP job creation projects (New

Jobs and Small Business New Jobs) was approximately 68.1 percent, which was lower than the 96.5 percent rate for the prior evaluation (*Workforce and Small Business Incentives*, JLARC 2018).

Employment analysis

Employment analysis was performed to show how VJIP's completed projects performed on an aggregate or portfolio basis in terms of job creation according to VEC files relative to what was reported in agency records. Projects were tracked before and after they received notification of award, during the 2011–2023 period. Annual project cohorts were "stacked" by the year of award (-1, 0,+1,+2,+3,+4, etc.). Thus, for a FY14 award cohort, 2012 represents year -1, 2013 year 0, 2014 year 1, etc. Aggregate project employment change over the period (i.e., year i, compared to the baseline year (-1) value). These employment change estimates were compared to aggregate job creation completion figures for VJIP, and a percentage was calculated, with 0 percent representing no aggregate reported job creation relative to the program reported aggregate completion and 100 percent representing total completion of program reported aggregate completion.

This measure could either undercount or overcount aggregate employment completion rates. First, failure to correctly match project records and VEC establishment data would introduce one bias source. Second, the annualized unit used to verify employment goal attainment may not correspond to program rules and cause bias; for example, VJIP grant rules require firms to maintain jobs creation for three months duration. Thus, monthly or quarterly data would be more appropriate for appraising job creation completion than the annual averages used here.

Estimation of business savings and tax revenue impacts from industry incentives

Sales and use tax exemptions provide relief from sales and use taxes on selected taxable goods and services for businesses in targeted industries. For most exemptions, eligible businesses obtain an exemption certificate from Virginia Tax (available online) and present it to merchants at the points of sale to claim the exemption. Neither the merchant nor the purchaser is required to report the tax savings to Virginia Tax outside of an audit process. Therefore, the amount of these tax savings to businesses must be estimated by other means.

For quantifying forgone revenue because of sales and use tax exemptions, Weldon Cooper Center relied on Virginia Tax fiscal impact estimates for only the contractor temporary storage exemption. Estimates based on IMPLAN and other data sources were used for the other six exemptions (Table B-3). IMPLAN is a commercial economic impact model produced by IMPLAN Group, LLC. It is based on input-output analysis, which requires estimates of the value of intermediate input purchase for each industry. The intermediate input purchase estimates for Virginia formed the basis of the relevant sales tax base for sales and use tax exemption revenue impact calculations. Spending on durable and leased good inputs is estimated by multiplying industry output by gross absorption coefficients for relevant IMPLAN commodity sectors, using the most recent data for industries and commodities. These coefficients represent the input purchases for various commodities per dollar of output. For example, the greenhouse, nursey, and floriculture industry spent $0.004 per dollar of output on prefabricated metal buildings and components. This absorption coefficient was multiplied by the output of the greenhouse, nursery, and floriculture industry for 2023 ($412,076,854) to obtain the estimated expenditure on this input ($1,648,307). The sectors targeted vary by sales and use tax

exemption, as do the categories of purchases that are eligible for exemption. Generally, tangible personal property purchases and leases are covered though the specific items sometimes differ.

TABLE B-3
Estimates of business savings from sales and use tax exemptions were based on different methods and sources

Exemption	Current sources used to derive estimate
Certain printed materials for out-of-state distribution exemption	IMPLAN, Economic Census, Lightcast™
Controlled environment agriculture exemption	Information on CEA firms from Virginia Department of Agriculture and Consumer Services, employment information from Virginia Employment Commission, and IMPLAN
Contractor temporary storage exemption	Virginia Tax (Sales and use tax study 1995)
Electrostatic Duplicators Exemption	IMPLAN, Lightcast™
Out-of-state nuclear facility repair exemption	IMPLAN, Virginia Employment Commission, Lightcast™
Taxi parts and radios exemption	Information from Virginia Taxicab Association, Virginia Department of Motor Vehicles, and Bureau of Labor Statistics Quarterly Census of Employment and Wages
Uniform rental and laundry businesses exemption	IMPLAN, Lightcast™

SOURCE: Weldon Cooper Center.

Because the exemptions are sometimes more narrowly targeted than the individual IMPLAN sectors available, supplemental data from Lightcast™, Virginia Employment Commission, and Bureau of Labor Statistics were used to apportion the sector purchases to narrower industry subsets. This process is detailed further under the heading of each exemption where it was used.

Other adjustments are needed to convert calendar years to fiscal years. IMPLAN purchases are expressed in calendar years; thus, fiscal year estimates were calculated by averaging two calendar years (e.g., FY15 is the average of CY14 and CY15).

The estimates provided in this report are the same as reported in the previous annual report in two instances: high-speed electronic duplications exemption and the uniform rental and laundry businesses exemption (with the exception of the FY23 estimate, which is based on newly released 2023 IMPLAN data instead of inflation-adjusting the FY22 amount to FY23). The estimates in this report were revised for three other exemptions (certain printed materials for out-of-state distribution exemption,

out-of-state nuclear facility repair exemption, and taxi parts and radios exemption). Revised methods were developed for this report to improve the estimates. In addition, a new exemption, the controlled environment agriculture exemption, was estimated for the first time.

Taxi parts and radios exemption

This estimation for the taxi parts and radios exemption updates a similar analysis by Virginia Tax for a fiscal impact statement for proposed legislation that would have eliminated this exemption in 2004. The value of the exemption relies on an estimate of the average exemption value per licensed taxicab provided by the Virginia Taxicab Association ($1,200 per taxicab) and the number of licensed taxicabs for FY23 provided by the Department of Motor Vehicles (2,161). The $1,200 per vehicle estimate is down slightly from the nominal value of $1,240 based on the 2004 Virginia Tax estimate (this would be closer to $2,000 per vehicle with a Consumer Price Index inflation adjustment). According to the Virginia Taxicab Association, this reduction may be due to reduced vehicles mileage attributable to changes in the taxicab services market and improved dispatch technology, stricter parts inventory practices, and advances in automotive technology. The association has 14-member taxi companies that account for approximately 500 taxis of which approximately 350 are company owned. This represents approximately 23 percent of all licensed taxicabs in the state.

To arrive at the estimate of eligible sales, the number of licensed taxicabs was multiplied by the average exempt amount. Since the number of taxicabs likely declined over the FY14 to FY23 period, this figure was adjusted upward for earlier fiscal years using employment figures on Taxi and Ridesharing Services industry (NAICS 485310) employment from the BLS Quarterly Census of Employment and Wages and downward to create nominal values using the BLS Consumer Price Index. Eligible sales were multiplied by the effective state sales tax rate of 4.28% (accounts for the dealer discount and excludes the local option sales tax) to obtain the revenue impact.

Certain printed materials for out-of-state distribution exemption

The value for the printed materials exemption (previously based on Virginia TAX estimates for annual reports) is based on new estimates using commodity demand data from IMPLAN, Lightcast™ employment data, and information from the Economic Census on the percentage of sales/shipments by the commercial printing industry on eligible advertising-related printed supplies. To estimate the exemption tax revenue impact, the exemption was divided into two parts: (a) the part of the statute that describes the exemption used by out-of-state entities that purchase eligible products from Virginia printers and (b) the part of the statute that describes the exemption for Virginia-based advertising firms that purchase eligible printing products from Virginia printers for out-of-state distribution.

To estimate part (a), the IMPLAN printing industry (IMPLAN sector 144) was used. The tax revenue impact was calculated by

- obtaining industry output/sales data for the period 2013–2023 from IMPLAN for the printing industry,
- determining the percentage of printed materials that are exported outside the state for the industry (74.82 percent) from IMPLAN commodity trade data,

- obtaining the percentage of total commercial printing industry shipments accounted for by catalogs/eligible printed products according to 2017 Economic Census product by industry data for the commercial printing industry, and
- computing the percentage of the printing industry employment accounted for by the commercial printing industry over the 2013–2023 period (NAICS 323111) using Lightcast employment data.

Multiplying these quantities produced estimated eligible sales, which were then converted from calendar years to fiscal years by averaging calendar years (e.g., (CY13+CY14)/2=FY14. Lastly, the eligible sales were multiplied by the effective tax rate of 4.28 percent to obtain the revenue impact. The revenue impact in FY23 was estimated at $8,867,773.

To estimate part (b), industry output/sales data—for the period 2013–2023 from IMPLAN for the advertising, public relations, and related services industry (IMPLAN 447)—was multiplied by the percentage of outlays for industry printed materials commodity inputs (1.2 percent) (social accounts, balance sheets, industry commodity demand) and the percentage of advertising, public relations, and related services industry output that is exported (6.8 percent) from IMPLAN commodity trade data. This provided the printed inputs that were eligible for the exemption, which was multiplied by the effective state sales tax rate of 4.28 percent to obtain the revenue impact. The revenue impact in FY23 was estimated at $169,308, by far the smaller of the two exemption components.

In the last two annual reports, estimates from Virginia Tax produced in 2022 and 2017 were used and extrapolated forwards (FY23) and backwards (FY14–FY21) using the consumer price index. Virginia Tax estimates were derived from data using the 2022 U.S. commercial printing industry revenue estimate from Statista. Revenues were apportioned to Virginia using firm-level sales data from the 2022 Printing Impressions survey of the top 300 largest printers compiled by the Printing United Alliance. The percentage of printed catalog sales and Virginia's share of total U.S. sales from the report's sample data were applied to U.S. revenues as the means for apportionment. Exemption revenue impacts are then estimated by applying the Virginia sales and use tax rate distribution to the Virginia sales revenue estimates. No distinction is made between the out-of-state and in-state users of the exemption in Virginia Tax estimates. Prior to that, the estimate was based on extrapolating estimates from a Virginia Tax sales and use report (1991) for FY14 to FY21 and using the Virginia Tax 2022 updated estimate for FY22 and FY23. The Virginia Tax estimate for the exemption in FY22 ($7.417 million) was 14 percent lower than the corresponding estimate made by the Weldon Cooper Center ($8.643 million).

Contractor temporary storage exemption

The tax revenue impact estimate for the contractor exemption is based on an older estimate made by Virginia Tax for a 1995 sales and use tax report. This figure was inflation adjusted using the CPI index to FY14-FY23. In a 2004 Fiscal Impact Statement for HB1488, Virginia Tax reported that 17 contractors had filed a total of 67 exemption certificates over a two-year period. The Virginia Department of Taxation indicated that the revenue impact of the exemption is likely to be relatively small.

High-speed electrostatic duplicators exemption

Estimates for the electrostatic duplicators exemption rely on Virginia IMPLAN data and Virginia Lightcast 6-digit NAICS employment data. IMPLAN output for Industry Code 455 (Business Support Services) was obtained and multiplied by the percentage of industry outlays on eligible equipment and leases, namely IMPLAN Commodities 3261 (commercial and service industry machinery) and 3435 (commercial and industrial machinery and equipment rental and leasing services). Because the Other business service centers industry (NAICS 561439), which contains copy centers, forms a relatively small part of the IMPLAN business support services sector, Lightcast employment data at the six-digit NAICS level was used to apportion the exempted sales to the sector targeted by the exemption. This total by year represented total purchases eligible for the exemption, which were multiplied by the effective state sales tax rate of 4.28 percent to obtain the state tax revenue impact.

Out-of-state nuclear facility repair exemption

Estimates for the nuclear facility repair exemption use Virginia IMPLAN data, VEC QCEW confidential employment data, and Virginia Lightcast six-digit NAICS employment data. According to Virginia Tax, there is primarily one large company that uses this exemption. This company is categorized in NAICS Code 541330 (Engineering Services), which comprises part of IMPLAN 439 (architectural, engineering, and related services). Output for this sector was multiplied by the percentage of outlays on exempt purchases, assumed to consist of spending on inputs that fall within manufactured commodity sectors 3104–3375 and rental/leased equipment (3432, 3433, 3435, 3436) sectors. This figure was then multiplied by the proportion of output for IMPLAN sector 439 that was exported outside the state (22.6 percent). The total from these calculations was then apportioned to the firm using the firm's employment identified from confidential VEC QCEW records as a proportion of total employment in the engineering services (541330) industry. This proportion was then multiplied by the proportion of IMPLAN sector 439 (which encompasses NAICS codes 541310-541380) that consists of engineering services (NAICS 541330) using Lightcast six-digit NAICS employment. This total by year represented total purchases eligible for the exemption, which were multiplied by the effective state sales tax rate of 4.28 percent to obtain the state tax revenue impact.

Uniform rental and laundry businesses exemption

Data on industry output from IMPLAN for sector 501 (dry-cleaning and laundry services) was the starting point for estimating the tax revenue impact of the uniform rental exemption. This figure was multiplied by the percentage of outlays on exempt purchases, assumed to consist of spending on inputs that fall within manufactured commodity sectors 3104-3375. Because this exemption is not available for all dry-cleaning and laundry services, particularly those oriented towards consumers rather than industry, Lightcast employment data for the two industry-serving sectors (812331 linen supply and 812332 industrial launders) was used to apportion the total sector eligible purchases. This was then multiplied by the effective state sales tax rate of 4.28 percent to obtain the state tax revenue estimate.

Controlled environment agriculture exemption

The controlled environment agriculture (CEA) exemption became available to eligible CEA firms on July 1, 2023. Thus, the methodology outlined below provides an estimate for FY24 for illustrative purposes and a benchmark estimate of the approximate size of the incentive compared with other economic development incentives in this report. The estimate is based on a list of CEA operations in Virginia compiled by VDACS. The list consists of 21 establishments, including 19 that were operating in the second quarter of 2023. Using confidential VEC QCEW data, the establishments are estimated to have 1,574 wage and salary employees in Virginia in FY23. Although the establishments are classified in different NAICS industries, the predominant industry is 1114 (greenhouse, nursery, and horticulture industry) and the production technology of the associated IMPLAN sector (IMPLAN 6 Greenhouse, nursery, and floriculture production) is assumed to be representative of the entire industry. The number of employees was converted to output using the output-to-employment ratio for the industry. This figure was then multiplied by the proportion of purchased inputs that were eligible for the exemption. Exempted manufactured commodity sectors 3132–3135 (various wood products), 3178–3318 (various plastic and rubber products, tools, and machinery), 3369 (gaskets, packings, and sealing devices), and 3371 (fasteners, buttons, needles ad pins) were assumed to be the eligible input purchases. These product inputs represented approximately 2.1 percent of outlays. Finally, this was multiplied by the effective state sales tax rate of 4.28 percent to obtain the revenue impact. Since no CY24 IMPLAN data was available, this amount was assumed to be the FY24 revenue impact.

Interviews with agencies and stakeholders

Meetings, online conferences, and phone conversations were held with agency staff to discuss programs evaluated in this report, including staff from

- Virginia Tax (exemptions and worker training tax credit),
- VEDP (Virginia Talent Accelerator Program and VJIP),
- the secretary of agriculture and forestry and VDACS (CEA exemption),
- Virginia Nuclear Energy Consortium Authority, and
- Virginia Works (Department of Workforce Development and Advancement).

Interviews with selected stakeholders, including representatives of the Virginia Taxicab Association, the Textile Rental Services Association, and two executives from commercial printing firms, were conducted to discuss their awareness, usage, and thoughts about their respective industry exemptions (taxi parts and radio, uniform rental and laundry businesses, and certain printed materials for out-of-state distribution exemptions).

Review of other states' workforce incentives and industry tax exemptions

Weldon Cooper Center staff reviewed several sources of information to obtain data on state workforce incentives and industry tax exemptions. The principal source of information for the workforce related grants and tax credits was the Council for Community and Economic Research (C2ER) online State Business Incentives Database, which reflects incentive programs in place as of 2023 (the last time the database was updated). Supplemental information was obtained from several other sources such as Shadewald and Nelson (2025). In addition, internet research of economic development agency,

department of taxation, and legislative websites for each state was used to find newer programs and identify important features of each program.

The purpose of the state comparison analysis was to highlight key features of the other state programs that were key to the study analysis, such as (1) the existence of a program, (2) whether it was a tax credit, grant, or other in-kind assistance, (3) determine the minimum wage eligibility requirements for job creation incentives, and (4) determine the average state financial assistance provided for worker training and job creation per eligible workers. In computing minimum wage requirements by state, the rule of thumb was to use federal minimum wage or state minimum wage (if higher) if no wage eligibility requirement was stated. When states stipulated that applicants must pay at least the level of the county average wage where the firm is locating or expanding, this was estimated by selecting the average state wage in the state using QCEW 2023 records. When states had multiple programs, an average wage requirement was estimated by weighting program minimum wage requirements equally.

Review of documents and literature

During this study, several sources of information, including documents, reports, and published or unpublished research were examined. The purpose of this literature review was to understand the purpose and goals of Virginia incentive programs, industry locational factors, role and importance of economic incentives, market imperfection rationales for programs, and methodological approaches for quantifying the economic and tax revenue impacts of economic incentives. Sources consulted included:

- program materials describing the programs, Virginia agency reports describing program usage, and legislative statutes authorizing the programs;
- evaluations and economic impact studies published by state agencies or their consultants in other states;
- books, reports, and articles that examine job creation and job retaining incentives and the performance of individual industries such as the taxicab services and printing industries; and
- studies that attempt to quantify the economic impact of economic development incentives using ex-ante and ex-post modeling methods.

Appendix C: Economic benefits and return in revenue for all Virginia incentives reviewed to date

Economic development incentives vary in their economic benefit and return in revenue to the state. To provide context to the economic benefits and return in revenue generated by each incentive, incentives have been categorized as having a negligible, low, moderate, or high economic benefit and return in revenue. To determine the category, each incentive is scored from 0 to three on four measures: the amount of jobs, Virginia GDP, and personal income generated per $1 million spent on the incentive and the return in revenue generated per $1 spent on the incentive. The scoring is based on the distribution of all 83 incentives reviewed to date for each of the four measures, with a score of '0' meaning the incentive fell below the 25th percentile (or first quartile) of the distribution for the measure and a score of 'three' meaning the incentive was in the highest quartile (above the 75th percentile) for the measure.

The scores for the three measures of economic benefits (jobs, Virginia GDP, and personal income) were averaged to arrive at an overall average score for economic benefits for each incentive. Incentives with average scores for the three measures near '0' were categorized as having negligible economic benefits relative to other incentives. Incentives with average scores near '1', '2', or '3' were categorized as having low, moderate, or high economic benefits, respectively, relative to other incentives. For return in revenue, an incentive with a '0' score on that measure was categorized as having a negligible return in revenue relative to other incentives. An incentive with a score of '1', '2', or '3' was categorized as having a low, moderate, or high return in revenue, respectively, relative to other incentives.

An incentive's category may change over time. Of the 83 Virginia economic development incentives that have been evaluated so far, and because incentives are categorized relative to other incentives evaluated, incentives may change categories as additional incentives are evaluated each year. Once all incentives are evaluated, the incentives will be re-evaluated. The category may change for re-evaluated incentives because of new or improved outcomes data, program changes, and changes to the state economy and industry mix.

Of the incentives evaluated through the first half of 2025, grants tend to generate moderate or relatively high economic benefits and returns in revenue. Tax incentives tend to generate low or negligible economic benefits and returns in revenue (Table C-1). Grant programs have higher economic benefits than other types of incentives because a higher percentage of grant funding is directed to corporate headquarters or businesses in manufacturing industries, which generally have high economic multipliers and pay higher wages. In addition, businesses that receive grants must agree to create jobs and make capital investments and usually make above minimum job creation and capital investment levels, but other incentives may not have similar requirements for businesses to receive an award.

TABLE C-1
Grants tend to generate higher economic benefits and returns in revenue than tax incentives

Incentive	Incentive type	Economic benefits	Return in state revenue
Aircraft parts, engines, and supplies exemption	Exemption	●○○○	●○○○
Airline common carrier exemption	Exemption	●○○○	●○○○
Certain printed materials for out-of-state distribution	Exemption	●○○○	●○○○
Coal Employment and Production Incentive Tax Credit [a]	Tax credit	●○○○	●○○○
Coalfield Employment Enhancement Tax Credit [a]	Tax credit	●○○○	●○○○
Farm Wineries and Vineyard Tax Credit	Tax credit	●○○○	●○○○
Film exemption	Exemption	●○○○	●○○○
Green Job Tax Credit	Tax credit	●○○○	●○○○
High-speed electrostatic duplicators exemption	Exemption	●○○○	●○○○
Major Research and Development Tax Credit	Tax Credit	●○○○	●○○○
Out-of-state nuclear facility repair exemption	Exemption	●○○○	●○○○
Qualified Business Long-Term Capital Gains Subtraction	Subtraction	●○○○	●○○○
Qualified Equity and Subordinated Debt Investment Tax Credit (angel investment tax credit) [a]	Tax credit	●○○○	●○○○
R&D exemption	Exemption	●○○○	●○○○
R&D expenses tax credit	Tax Credit	●○○○	●○○○
Railroad rolling stock exemption	Exemption	●○○○	●○○○
Recyclable Materials Tax Credit	Tax credit	●○○○	●○○○
Ships and vessels exemption	Exemption	●○○○	●○○○
Spaceport users exemption	Exemption	●○○○	●○○○
Telework Tax Credit [a]	Tax credit	●○○○	●○○○
Worker Training Tax Credit	Tax credit	●○○○	●○○○
Zero G Zero Tax resupply subtraction	Subtraction	●○○○	●○○○
Transportation Partnership Opportunity Fund	Grant	●○○○	●○○○

Incentive	Incentive type	Economic benefits	Return in state revenue
Contractor Temporary Storage Exemption	Exemption	●○○○	●●○○
Biodiesel and Green Diesel Tax Credit	Tax credit	●○○○	●●○○
Blue Star [b]	Grant	●○○○	●●○○
Semiconductor manufacturing exemption	Exemption	●●○○	●○○○
Pollution control equipment exemption	Exemption	●●○○	●●○○
Commonwealth Research Commercialization Program	Grant	●●○○	●●○○
Motion Picture Production Tax Credit	Tax credit	●●○○	●●○○
Railroad common carrier exemption	Exemption	●●○○	●●○○
Taxi parts and radios exemption	Exemption	●●○○	●●○○
Uniform rental and laundry exemption	Exemption	●●○○	●●○○
Tobacco Commission Megasite Grant	Grant	●●○○	●●○○
Worker Retraining Tax Credit	Tax credit	●●○○	●●○○
Barge and Rail Usage Tax Credit	Tax credit	●●○○	●●●○
Economic Development Access Program	Grant	●●○○	●●●○
Real Property Investment Grant	Grant	●●○○	●●●○
International Trade Facility Tax Credit	Tax credit	●●○○	●●●○
Agriculture and Forestry Industries Development Grant	Grant	●●○○	●●●○
Virginia Talent Accelerator Program	Grant [c]	●●○○	●●●○
SRI International	Grant	●●○○	●●●○
Virginia Investment Partnership Grant	Grant	●●○○	●●●●
Semiconductor wafer exemption	Exemption	●●●○	●●○○
Major Business Facility Jobs Tax Credit	Tax credit	●●●○	●●○○
Rail Industrial Access Program	Grant	●●●○	●●●○
Governor's Motion Picture Opportunity Fund	Grant	●●●○	●●●○
Job Creation Grant	Grant	●●●○	●●●○
Port of Virginia Economic and Infrastructure Grant	Grant	●●●○	●●●○

Incentive	Incentive type	Economic benefits	Return in state revenue
Port Volume Increase Tax Credit	Tax credit	●●●○	●●●○
Qimonda (semiconductor) grant	Grant	●●●○	●●●○
Tobacco Region Opportunity Fund	Grant	●●●○	●●●○
CMA CGM	Grant	●●●○	●●●○
LEGO Group	Grant	●●●○	●●●○
Huntington Ingalls-Production	Grant	●●●○	●●●○
Rocket Lab	Grant	●●●○	●●●○
Microsoft	Grant	●●●○	●●●○
Rolls-Royce [b]	Grant	●●●○	●●●○
CoStar	Grant	●●●○	●●●○
Virginia Jobs Investment Program	Grant	●●●○	●●●○
Morgan Olson [b]	Grant	●●●○	●●●●
Small Business Investment Grant	Grant	●●●●	●●●○
Manufacturers SSF apportionment	Other	●●●●	●●●●
Virginia Economic Development Incentive Grant	Grant	●●●●	●●●●
Amazon HQ2	Grant	●●●●	●●●●
Micron (2018 custom grant) [b]	Grant	●●●●	●●●●
Cash Collateral Program	Loan	●●●●	●●●●
Commonwealth's Development Opportunity Fund Grant	Grant	●●●●	●●●●
Data center exemption	Exemption	●●●●	●●●●
Economic Development Loan Fund	Loan	●●●●	●●●●
GAP Funds Program	Other	●●●●	●●●●
Loan Guaranty Program	Loan	●●●●	●●●●
Major Eligible Employer Grant	Grant	●●●●	●●●●

Incentive	Incentive type	Economic benefits	Return in state revenue
Micron (2005 grant)	Grant	●●●●	●●●●
Small Business Jobs Grant	Grant	●●●●	●●●●
SWaM Loan Fund	Loan	●●●●	●●●●
Trade Show Assistance Program	Grant [c]	●●●●	●●●●
Virginia Leaders in Export Trade (VALET)	Grant [c]	●●●●	●●●●
Merck	Grant	●●●●	●●●●
Volvo [b]	Grant	●●●●	●●●●
Huntington Ingalls-Training	Grant	●●●●	●●●●
Amazon Web Services	Grant	●●●●	●●●●
Virginia Business Ready Sites Program	Grant	n.a.	n.a.

Negligible ●○○○ Low ●●○○ Moderate ●●●○ High ●●●●

SOURCE: JLARC staff analysis of economic impact and return in revenue estimates generated by the Weldon Cooper Center.
NOTE: Includes incentives evaluated as of the first half of 2025. Time period for which incentives are evaluated varies. Estimates are sensitive to the assumptions used to determine the percentage of economic activity that can be attributed to the incentive.
[a] Programs have been eliminated. [b] Grants terminated or are expected to terminate before completing performance. [c] Not technically grants but categorized with grants for purposes of this analysis.

Appendix D: State workforce training incentives

Workforce improvement incentives are designed to attract and retain businesses by helping firms meet workforce needs during relocation or expansion. States use several different economic incentive models to encourage business workforce training for economic development purposes. These models include (1) tax credit, (2) grant/voucher, (3) turnkey (free service), (4) shared-cost, (5) public-private partnership, and (6) regional or sector-focused models. Like other states, Virginia uses several different models rather than a "one-size-fits-all" model since firms often have different workforce training needs. The models differ primarily in terms of mode of training delivery/reimbursement, customization, and the extent of state involvement. Virginia offers at least one program that represents each of these models, but programs in only three of the models are evaluated in this report Table D-1).

TABLE D-1
Virginia utilizes different business incentive models for workforce training

Model	Description	Strengths	Weaknesses	Virginia program
Evaluated in this report				
Tax credit	Firms provided tax credit for training costs.	Greater flexibility for firms. Minimal state operational costs.	Limited to businesses with sufficient tax liability.	Worker Training Tax Credit
Voucher/grant	Grants/vouchers allow firms to design/procure own training programs.	Greater flexibility for firms. More state discretion and oversight on training quality.		Virginia Jobs Investment Program
Turnkey	Firms provided customized workforce services at no cost.	No cost to businesses. Fast, state-managed implementation. Highly customized.	More state overhead. Higher cost to the state.	Virginia Talent Accelerator Program
Not evaluated in this report or evaluation series				
Shared cost	State shares cost of workforce services with business or students.	Encourages mutual investment.		FastForward
Public-private	Collaboration between state agencies, educational institutions, and businesses to deliver workforce training.	Leverages existing education infrastructure. Aligns with long-term workforce strategies.	Requires strong institutional partnerships. Longer setup time compared to turnkey models.	Apprenticeship programs, Virginia Community College System programs

Regional/sector	Programs targeting specific industries or regions to meet strategic workforce needs.	Targets strategic industries and regions. Encourages collaboration between firms.	Narrow scope may exclude other regions and industries.	Go Virginia workforce grants

SOURCE: Weldon Cooper Center.
[a] These programs have been evaluated by JLARC in the past (community college workforce programs, GO Virginia grants) or are in the process of being evaluated for a fall 2025 report (community college workforce and FastForward programs).

Almost all states offer some form of job creation or training incentive like VJIP

Almost all states (42) offer some form of job creation or training incentive to encourage business location or expansion similar to VJIP (Table D-2). Job creation incentives are among the oldest and most common economic incentive programs offered by states. These incentives are estimated to make up 45 percent of the value of state incentives in 2015 and grew faster than other economic incentives over the 26-year period 1990–2015, accounting for two-thirds of total state economic incentive growth (Bartik 2017). State job creation incentive features differ along various dimensions, including: (a) average size of award, (b) restrictions on use of award, (c) grant versus tax credit format of award, (d) minimum wage threshold, (e) minimum job creation threshold, (f) minimum capital investment threshold, (g) industries targeted, (f) geographical targeting (e.g., enterprise zones, rural regions), and (g) worker targeting (e.g., unemployed or disadvantaged individuals). To provide a purer comparison to VJIP, Table D-2 excludes highly discretionary "deal closing" funds, geographically targeted job creation incentives, and job creation incentives that target disadvantaged populations.

VJIP is similar to other state job creation incentives in several respects. It favors traded sector industries and specifies minimal job creation and capital investment eligibility requirements. It also differs in some respects. VJIP restricts award use to recruitment and training purposes, while most job creation incentives do not limit usage to these types of expenditures. The average award amount per job for VJIP is only $844 over the FY14–FY23 period, compared with an average of $4,250 and median of $2,500 for 17 state job creation tax credit/grant award programs that compute awards per eligible employee rather than additional payroll created. Some states tie the incentive value to a percentage of payroll creation, which ensures that the incentive amount increases in line with inflation and worker productivity and does not require periodic recalibration, but this makes it difficult to determine the average award per job. Moreover, some states offer higher incentive awards for projects located in disadvantaged areas.

VJIP's minimum wage requirements are generally lower than other comparable state job creation incentives elsewhere in the U.S. The Virginia minimum wage was $12.00 per hour in FY23, making the program minimum wage threshold $14.40. This represents a 47 percent increase over the $9.79 minimum eligible wage the program required in 2018. However, this increase has not kept pace with minimum eligible wages elsewhere in the U.S. because most states benchmark their minimum wage standard with state or local average prevailing wages. A tally of program minimums in other states

indicates that the average state minimum wage is $19.47 and has a median of $18.01. This varies from a high of $48.66 in Oregon to a low of $7.25 (the federal minimum wage) in Indiana.

Some states offer job training tax credits

Nineteen states (including Virginia) currently offer job training tax credits; four of these states offer two (Table D-1). Most of the state credits fund apprenticeship training; sometimes, the tax credit is available only for apprenticeship training. A handful of states also help with apprentice wages. This tally does not include programs that reimburse firms for college tuition reimbursement or fund remediation/basic skills training. However, it does include programs that fund pre-apprenticeships, internships, and mentorship programs.

State training tax credit programs differ in many different respects, including the types of skills that are supported and the candidates for training. Reimbursement formulas also vary widely but typically reimburse up to 50 percent of training costs, with per employee caps in the $500 to $6,000 range. The average incentive value for training tax credit and grant programs is $2,557 per employee, and the median value is $2,000. With a tax credit reimbursement value from $500–$1,000, Virginia's worker training tax credit offers a substantially lower reimbursement rate than most state programs.

Spaulding and Petrov (2023) indicate that more states have introduced incentives for apprenticeship training in recent years. Rosenberg and Dunn (2020) indicate that 80 percent of states reported using workforce training and education incentives, and 67 percent funded apprenticeship training. Twenty-one percent of states offered subsidies for apprentice wages. Some states have recently enhanced their training tax credits. During the 2024 legislative session, South Carolina amended its Apprenticeship Income Tax Credit to increase its reimbursement from $1,000 to $4,000–$6,000 for a youth apprentice. Also, the $1,000 tax credit rollover period was expanded to three years (Wall and Allen 2024).

TABLE D-1
State workforce improvement incentives

State	Job creation grant	Job creation tax credit	Estimated average wage minimum for job creation incentives	Training grant	Training - direct delivery	Job training tax credit	Average training assistance per employee
Alabama		X (2)	$8.63		X	X	$900
Alaska			--				
Arizona		X (2)	$43.89				
Arkansas		X (2)	$20.02	X	X	X	$2,000
California		X (2)	$23.25	X			
Colorado		X	$37.65	X			$2,500
Connecticut		X	$18.02	X (4)		X (2)	$3,675
Delaware		X (2)	$20.45	X			$2,000
District of Columbia			--				
Florida			--	X (2)			$2,000
Georgia		X (3)	$24.40		X	X (2)	$1,250
Hawaii			--				
Idaho	X	X	$23.26	X			
Illinois		X	$13.00			X	$3,500
Indiana		X	$7.25	X			$2,000
Iowa		X (2)	$20.80	X (2)	X		$3,422
Kansas		X (2)	$17.99	X (3)		X	$2,050
Kentucky		X (3)	$9.67	X			$2,000

State	Job creation grant	Job creation tax credit	Estimated average wage minimum for job creation incentives	Training grant	Training - direct delivery	Job training tax credit	Average training assistance per employee
Louisiana		X	$18.00	X	X	X	$1,000
Maine		X	$29.30	X (3)			$1,250
Maryland	X	X	$15.46	X (4)		X	$3,667
Massachusetts		X	$15.00	X (2)		X	$3,960
Michigan	X		$10.10	X (2)			$2,000
Minnesota	X		$14.68	X			$6,000
Mississippi		X (2)	$16.41	X		X	$2,500
Missouri		X	$27.07		X		$1,500
Montana	X		$17.51	X		X	$2,785
Nebraska		X	$19.27	X (3)			$7,500
Nevada	X		$15.00	X			Not specified
New Hampshire			--	X			$750
New Jersey		X	$21.53	X (3)			$2,000
New Mexico		X	$19.23	X		X	Not specified
New York		X (2)	$15.00	X		X (2)	$9,000
North Carolina	X		$31.78	X (2)	X		Not specified
North Dakota			--	X (2)		X	$3,500

State	Job creation grant	Job creation tax credit	Estimated average wage minimum for job creation incentives	Training grant	Training - direct delivery	Job training tax credit	Average training assistance per employee
Ohio	X	X	$10.88	X (2)	X		$2,000
Oklahoma	X (3)	X	$21.27	X	X		Not specified
Oregon	X		$48.46				
Pennsylvania	X		$10.88	X (2)			$2,500
Rhode Island		X (2)	$26.83	X (3)		X (2)	$2,720
South Carolina		X (3)	$14.08	X (3)	X	X	$1,000
South Dakota	X		$10.80	X			$1,000
Tennessee	X	X	$7.25	X			
Texas			--	X (2)			$1,675
Utah	X (2)		$30.76	X (2)			Not specified
Vermont	X		$18.45	X			$2,000
Virginia	X	X	$14.40	X	X	X	$1,000
Washington			--	X		X	$2,000
West Virginia		X	$19.06	X		X	$2,000
Wisconsin	X		$10.88	X			Not specified
Wyoming			--	X (4)			$2,000

State	Job creation grant	Job creation tax credit	Estimated average wage minimum for job creation incentives	Training grant	Training - direct delivery	Job training tax credit	Average training assistance per employee
Total/Average and median (wage and training assistance)	17	31	$19.47	42	11	19	$2,557

SOURCE: Weldon Cooper Center.
NOTE: Some states have multiple incentives, denoted as (#).

Five states offer turnkey workforce development programs

State turnkey workforce development incentive programs are designed to attract businesses to specific states by addressing firm concerns about the availability of a skilled and ready workforce. The term "turnkey" reflects the all-inclusive nature of these programs—they handle workforce recruitment, training, and onboarding, providing employers with a "ready-to-work" labor pool. The earliest programs were ReadySC and the Georgia Quick Start program in the 1960s. Since that time, customized programs in three other states were created, including Louisiana FastStart, Alabama Industrial Development Training, and Virginia's program.

While many other states offer workforce development assistance programs as part of their economic incentive offerings, they often differ from the turnkey approach. The hallmark of the turnkey approach is the fast deployment of resources by state-designated agencies at no cost. For example, North Carolina NCWorks offers training through the North Carolina Community College System to support new, expanding, and existing industries, but it differs from a comprehensive one-stop economic development agency approach. Community colleges receive funding and determine how to serve the company. Missouri's QuickStart program is a hybrid program—it provides some in-kind customized recruitment services and reimburses companies for qualified training expenses. Some state programs, similar to VJIP, provide primarily grant assistance to firms to reimburse some of the costs of onboarding and training (e.g., Florida Quick Response Training program, JobsOhio Talent Acquisition Services program).

According to VEDP staff, the Virginia Talent Accelerator Program also differs from other state turnkey programs in its selectivity and program scope. The program restricts participants to new and expanding firms and on production jobs where it can obtain economies of scale in service delivery. Some states, such as Alabama and South Carolina, accommodate other types of firms. The Virginia Talent Accelerator Program also provides wrap-around services, while other states typically offer fewer choices. For example, Louisiana training services are more limited, Alabama focuses on training before hiring, and Georgia does not provide recruitment services for every project.

Virginia's program has been ranked at or near the top by major site selection magazines, such as *Area Development* (#2) and *Business Facilities* (#1). The magazines use different methodologies for rating state programs. *Business Facilities'* ranking is based on editor experience and visits. They use a qualitative approach and meet with each of the programs. *Area Development's* rankings take longer to adjust over time because they are based on a survey of site developers, many of whom may not have direct experience with the Virginia Talent Accelerator Program because it is newer than other state turnkey programs.

Appendix E: Local economic developers rate VJIP as most useful incentive

Weldon Cooper Center staff surveyed local economic development staff for each of Virginia's 133 counties and independent cities to assess the importance of incentives to attract businesses, estimate the supply and demand for business ready sites, and assess the importance of various industrial location and expansion factors in 2022. The response rate was slightly over 50 percent.

In this survey, VJIP was rated as the state's most useful incentive program. Eighty percent of respondents indicated that the incentive program was "very useful," and 12 percent as "somewhat useful." The average weighted rating for the program was 3.84 on a four-point scale. The program also had a very high familiarity, with only 5 percent of the respondents indicating they were not familiar with the program. The only other incentive examined in this report, the Worker Retraining/Training Tax Credit, was rated 10th highest in terms of average rating, though 25 percent of local economic developers were not familiar with it.

TABLE E-1:
VJIP is rated as the most useful Virginia incentive program by local economic developers

State incentive	(1) Not useful at all	(2) Not very useful	(3) Somewhat useful	(4) Very useful	Not familiar with the program	Otherwise cannot assess	Average rating
Virginia Jobs Investment Program	0.0%	1.5%	12.1%	80.3%	4.6%	1.5%	3.84
Agriculture and Forestry Industries Development Grant	1.5	3.0	13.4	73.1	7.5	1.5	3.74
Commonwealth's Development Opportunity Fund	4.6	3.0	16.7	69.7	6.1	0.0	3.61
Virginia Business Ready Sites Program	1.5	13.4	26.9	55.2	0.0	3.0	3.40
Job Creation Grant	7.5	1.5	25.4	47.8	11.9	6.0	3.38
Virginia Investment Performance Grant	4.5	6.0	26.9	41.8	17.9	3.0	3.34
Economic Development Access Program	4.5	7.5	29.9	44.8	10.5	3.0	3.33
Transportation Partnership Opportunity Fund	4.6	6.1	19.7	31.8	31.8	6.1	3.27
Tourism Development Financing Program	6.1	6.1	28.8	39.4	13.6	6.1	3.26

State incentive	(1) Not useful at all	(2) Not very useful	(3) Somewhat useful	(4) Very useful	Not familiar with the program	Otherwise cannot assess	Average rating
Worker Training Tax Credit/Worker Retraining Tax Credit	7.5	6.0	20.9	40.3	25.4	0.0	3.26
Real Property Improvement Grant	7.6	7.6	19.7	42.4	15.2	7.6	3.25
Virginia Economic Development Incentive Grant	6.3	6.3	32.8	39.1	10.9	4.7	3.24
Data Center Exemption	6.1	9.1	18.2	34.9	21.2	10.6	3.20
Major Eligible Employer Grant	10.5	3.0	26.9	32.8	22.4	4.5	3.12
GO Virginia	7.5	11.9	40.3	38.8	0.0	1.5	3.12
Small Business Investment Grant Fund	6.0	4.5	29.9	23.8	29.9	6.0	3.12
Major Eligible Employer Grant	9.4	9.4	26.6	37.5	14.1	3.1	3.11
Small Business Jobs Grant Fund Program	6.1	7.6	25.8	24.2	30.3	6.1	3.07
Port of Virginia Economic and Infrastructure Grant	12.1	9.1	24.2	34.9	15.2	4.6	3.02
Commonwealth Research Commercialization Fund	6.0	11.9	20.9	23.9	31.3	6.0	3.00
Major Research and Development Tax Credit	10.6	1.5	25.8	22.7	33.3	6.1	3.00
CIT GAP (Growth Accelerator Program) Fund	4.6	10.6	24.2	19.7	33.3	7.6	3.00
Rail Industrial Access Program	12.1	6.1	30.3	27.3	19.7	4.6	2.96
Research and Development Expenses Tax Credit	9.0	7.5	17.9	20.9	41.8	3.0	2.92
Virginia Port Volume Increase Tax Credit	13.4	3.0	19.4	22.4	37.3	4.5	2.87
International Trade Facility Tax Credit	9.0	7.5	20.9	17.9	40.3	4.5	2.86

State incentive	(1) Not useful at all	(2) Not very useful	(3) Somewhat useful	(4) Very useful	Not familiar with the program	Otherwise cannot assess	Average rating
Farm Wineries and Vineyards Tax Credit	9.0	9.0	22.4	16.4	34.4	9.0	2.82
Manufacturing Single Sales Factor Apportionment	7.6	9.1	13.6	12.1	50.0	7.6	2.71
Recyclable Materials Processing Equipment Tax Credit	13.4	6.0	28.4	7.5	38.8	6.0	2.54
Qualified Equity and Subordinated Debt Investment Tax Credit	11.9	4.5	11.9	9.0	56.7	6.0	2.48
Barge and Rail Usage Tax Credit	13.6	7.6	16.7	7.6	43.9	10.6	2.40
Virginia Coal Production and Employment Incentive Tax Credit	22.4	3.0	6.0	11.9	40.3	16.4	2.17
Coalfield Employment Enhancement Tax Credit	19.4	6.0	9.0	7.5	37.3	20.9	2.11

SOURCE: Weldon Cooper Center survey of local economic developers.
NOTE: N=67. See *Infrastructure and Regional Incentives* (JLARC 2020) for more information about the local economic developer survey.

Appendix F: Summary of each industry exemption

Exemption for certain printed materials for out-of-state distribution

(§ 58.1-609.6(4)(i)(ii))

Virginia's exemption for certain printed materials for out-of-state distribution exempts certain printed materials from sales and use taxes when those materials are intended for out-of-state distribution. The exemption was adopted in 1976 after unsuccessful litigation by a Virginia printer (Stuart McGuire v Commonwealth) challenging Virginia Tax's policy of taxing printing materials delivered to out-of-state customers. At the time, Virginia Tax's policy considered a taxable "delivery" to occur when printed materials were placed in the mail by a Virginia-based printer on behalf of the customer. This "constructive delivery" approach meant the materials were deemed delivered to the customer in Virginia, even if the materials were ultimately destined for out-of-state recipients. This exemption is currently set to expire July 1, 2028.

Exempted items. The exemption applies to printed materials like catalogs, brochures, or other promotional items that are produced in Virginia but are intended for distribution primarily outside the state. The exemption also covers the envelopes, containers and labels used for packaging and mailing, and paper furnished to a printer for fabrication into such printed materials if the materials are stored for 12 months or less in the Commonwealth and distributed for use outside the Commonwealth. The exemption does not apply to "administrative supplies" such as letterhead, envelopes, and other stationery, invoices, billing forms, payroll forms, price lists, timecards, computer cards, and similar supplies. Users of the exemption are required to provide a completed Certificate of Exemption (Form ST-10A) to the vendor.

Purpose. The exemption appears to have multiple purposes according to Virginia Tax (1991 sales and use tax report). The exemption was enacted to

- encourage direct marketers, especially those located outside the state, to purchase catalogs and other advertising printed material from Virginia printers;
- make Virginia printers more competitive with out-of-state printers by benefiting Virginia-based commercial printers and encouraging Virginia-based advertising firms to purchase printed materials from them tax free if the materials are intended for out-of-state distribution; and
- not taxing items that are part of interstate commerce, as the primary use of the materials is outside the state's jurisdiction.

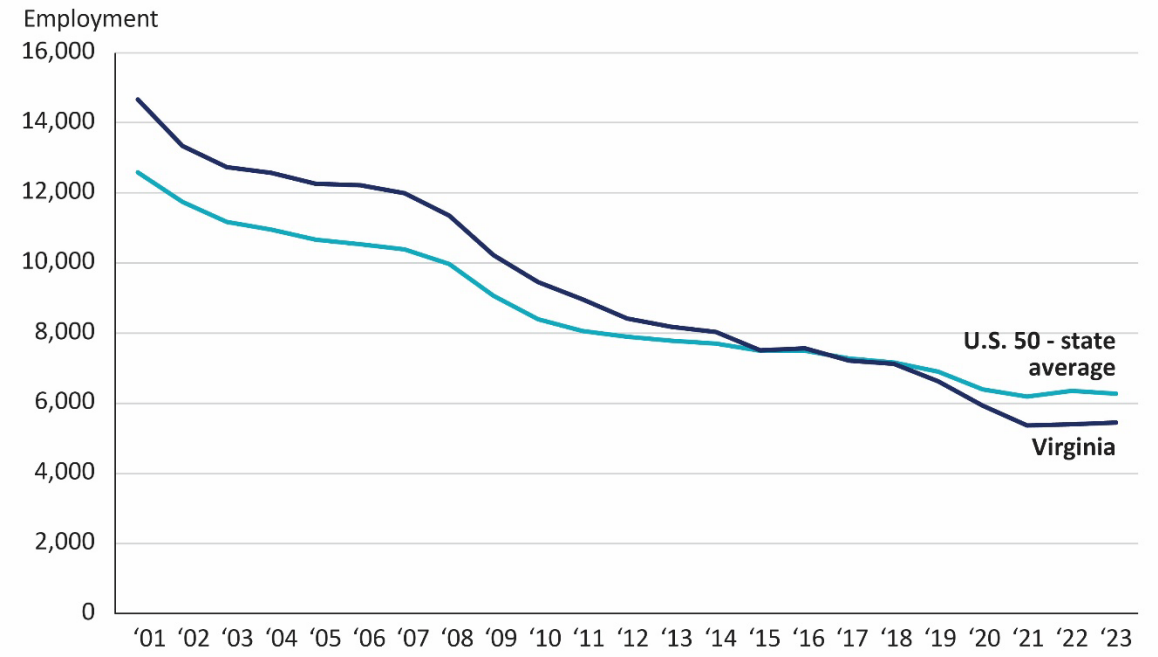
Beneficiaries. Users of the exemption include direct mail printers and print advertisers, particularly direct mail advertisers and advertising materials distributors.

Industry trends. These sectors are in decline both in Virginia and nationwide for technological and competitive reasons, with the commercial printing sector declining faster than the U.S. (Figure 5-3) and the advertising sector decreasing slower than the U.S. benchmark (Figure 5-4). As digital technologies such as the internet, e-marketing, social media, and AI have grown, print media have lost market share (IBIS 2024b). Digital media advertising is often less expensive, can reach larger audiences, can

be more narrowly targeted to granular customer market segments, and be used to more accurately measure audience response than print media (IBIS 2024c; IBIS 2025). Industry demand for print catalogs has also plummeted as consumers increasingly browse and purchase online. Digital media is also sometimes more highly valued by businesses and consumers because it is more environmentally friendly, generating less solid waste that is often disposed of in landfills. Print advertising is increasingly focused on a shrinking market of rural areas and older generations.

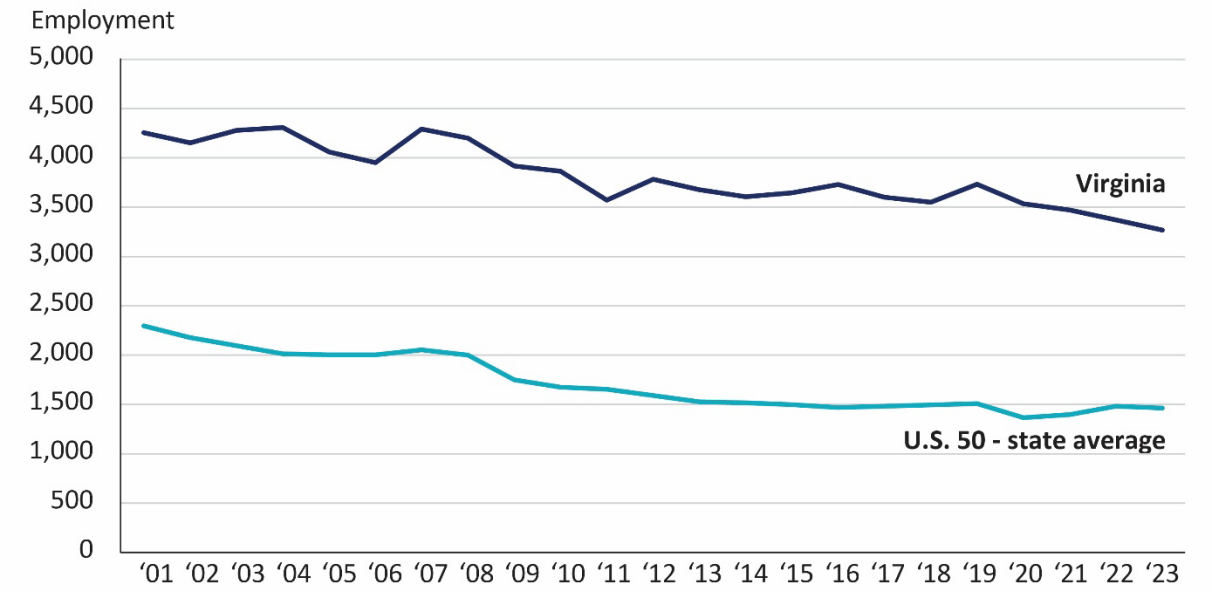
Industry representatives indicated that a significant amount of consolidation in the printing industry has occurred because of cost and competitive pressures. Commercial printers have also struggled with finding employees and the high costs ($4 million–$7 million) of investments in printing presses. They indicated that the exemption amount can often make a difference in bidding for some out-of-state contracts ($20,000–$50,000), because bids often differ by a few hundred dollars.

FIGURE F-1
Virginia commercial printing employment has declined faster than the U.S.



SOURCE: Lightcast™.

FIGURE F-2
Direct mail advertising/advertising materials distribution employment has declined slower in Virginia than the U.S.



SOURCE: Lightcast™.

States with similar exemptions. Virginia Tax reported that 17 states provided catalog exemptions similar to Virginia, and five states exempted catalogs with various exemptions in 1990. Information provided by the Print and Graphic Communications Association indicates that most states provide some sales tax exemptions to the printing industry, but only 11 offer an exemption similar to Virginia's exemptions on products for out-of-state use. Not all specify, as Virginia does, that the exemption applies only to products sold for advertising purposes.

Contractor temporary storage exemption

(§ 58.1-609.3(1))

The contractor temporary storage exemption allows tax free purchases of construction materials that are temporarily stored in Virginia and then incorporated into exempt construction projects outside the state. Exempt construction projects are typically projects for nonprofit or governmental entities that would be exempt from tax in the jurisdiction where the construction project occurs. This exemption was adopted in 1989. Prior to this, contractors paid the sales tax upon purchasing the construction materials and applied for a rebate. This rebate was adopted in 1973.

Purpose. The rationale for the exemption was to make Virginia construction suppliers more competitive with out-of-state suppliers as well as other purposes such as not hindering interstate commerce and preventing the taxation of intermediate inputs.

Beneficiaries. Direct beneficiaries of the exemption are construction contractors in Virginia that perform tax exempt construction outside of the state. Construction material suppliers in Virginia who sell materials for these projects also benefit.

Exempted items. Exempt purchases include construction materials that are to be incorporated into exempt real property construction and could be purchased tax free by the contractor in another state or country. The exemption does not apply to equipment, tools, supplies, etc. used in performance of the construction project that are not incorporated into the construction. Users of the exemption are required to provide a completed Certificate of Exemption (Form ST-11A) to the vendor.

Other states. Virginia Tax reported in 1995 that 14 states provided an exemption similar to Virginia's, including border states, Maryland and West Virginia. Some states provide an exemption for temporary storage to a broader range of industries. According to the Sales Tax Institute (2020), states usually exclude temporarily stored personal property from their definition of property use rather than list it separately in statute as an exemption. An analysis of current state tax codes by Schadewald and Nelson (2025) indicates that 19 states provide a temporary storage exemption for materials purchased outside the state and temporarily stored in the state prior to transport/use outside the state.

Controlled environment agriculture exemption

(§ 58.1-609.2)

The controlled environment agriculture (CEA) exemption reduces the costs for purchases of equipment and materials to grow crops (and sometimes seafood) in controlled environments such as greenhouses, vertical farms, or indoor farming facilities with hydroponics and aquaponics, often incorporating advanced technologies for climate control, lighting, and resource management. The exemption was adopted in 2023 after it was determined that the agricultural exemption did not apply to CEA because they are not located on farms and have a high-tech industrial production process similar to manufacturing.

Purpose. The CEA exemption expanded the agricultural exemption to include certain tangible personal property used directly by indoor, closed, controlled environment agricultural facilities to produce agricultural products. It also helped to promote the growth of the industry in the state and prevent the taxation of intermediate inputs.

The state's desire to support and grow the CEA industry because of Virginia's proximity to the growing eastern seaboard consumer markets was also a factor for establishing the exemption according to the secretary of agriculture and forestry. The incentive also promotes advanced agricultural technologies and infrastructure, positioning the state as a hub for agricultural innovation.

Exempt items. Items used directly in agricultural production for market in an indoor, closed, controlled-environment commercial agricultural facilities and greenhouses are exempt from the sales tax. These items can include internal and external components or materials such as automation equipment, lighting systems, water and water treatment equipment, etc., used to grow horticulture, floriculture, viticulture, or other farm crops or products in controlled environments. Users must submit an exemption certificate (Form ST-18) to suppliers at the time of purchase.

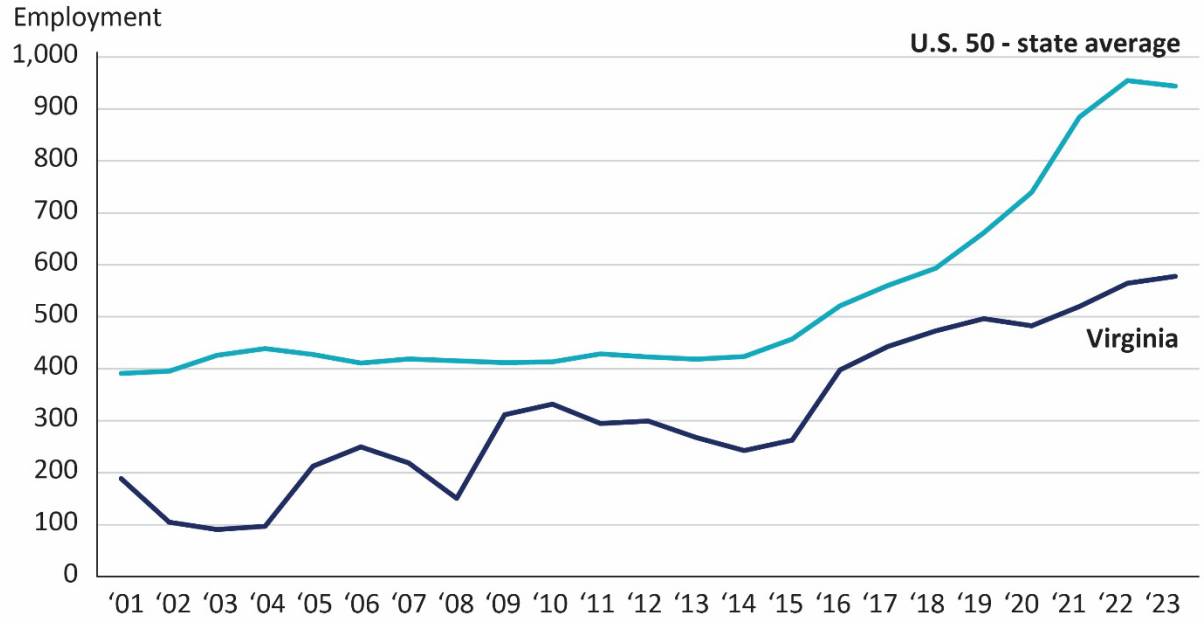
Beneficiaries. Indoor and vertical farm facilities or greenhouses. VDACS maintains an inventory of CEA firms operating in the Commonwealth. It currently lists 21 CEA establishments (two establishments have not yet opened their doors). Collectively, these firms employ 1,574 workers, according to 2023 QCEW data. Most (80 percent) of the employment in these establishments is identified within

the broader greenhouse (515), nursery (435), and floriculture (302) industry (NAICS 1114). Other firms are identified as "other vegetable farming" (NAICS 111219), finfish farming and fish hatcheries, support activities for crop production (NAICS 1115), and wholesale ag-related industries. It is not known to what extent these companies are using or are planning to use the exemption.

Other states. According to the secretary of agriculture and forestry and VDACS staff, a similar CEA sales and tax exemption is not available from other states. Florida, however, provides a machinery and equipment exemption for aquacultural activities conducted under controlled conditions. Unlike Virginia, some states may classify CEA as agriculture, making it eligible for the same exemptions as outdoor farms or may classify CEA as an industrial process, making it eligible for a manufacturing/industrial exemption.

Industry trends. Crops grown in environmentally controlled settings offer several advantages over outdoor soil-based crop production, including the ability to improve yields and crop quality, reduce the risk of crop failure due to severe weather conditions, provide year-long production of what have traditionally been seasonably available crops, produce close to major population centers to ensure freshness and reduce transportation costs, and use fewer pesticides and herbicides than outdoor agriculture (Dohlman 2024; IBIS 2023). The sector is currently small compared with outdoor production but is growing rapidly both in the U.S. and Virginia, though a at slower rate in Virginia (Figure F-3).

FIGURE F-3
The food crops grown under cover sector has grown faster in the U.S. than in Virginia



SOURCE: Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW).

High-speed electrostatic duplicators exemption

(§ 58.1-609.3(11)

The high-speed electronic duplicators exemption applies to firms primarily engaged in printing or photocopying products for sale or resale. High-speed duplicators are copying and printing machines that use electrostatic or digital printing technology that offer quick setup and production compared to traditional offset printing. The exemption was adopted in 1986.

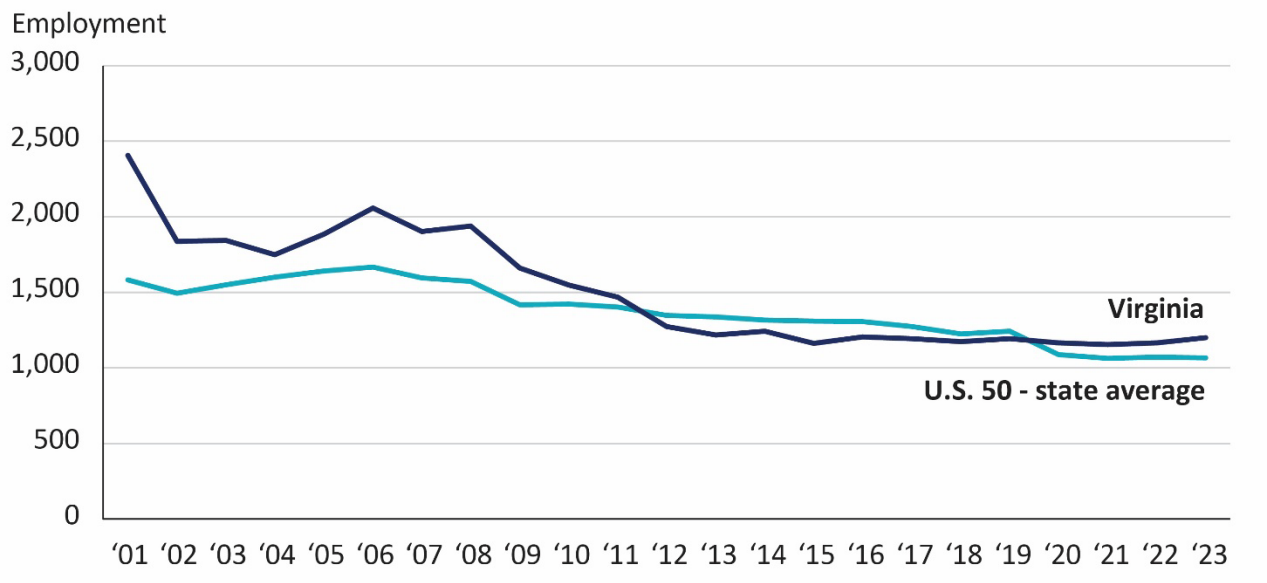
Purpose. According to a 1995 Virginia Tax report, the exemption was created in 1986 to extend to nonindustrial, service-oriented photocopy businesses the same treatment provided to traditional printers that are classified as manufacturers and may utilize the manufacturing exemption to purchase the equipment. A secondary purpose of this exemption may be to support the printing and photocopying industry by reducing the cost of purchasing or leasing high-capacity duplicating equipment and preventing the taxation of intermediate inputs.

Exempt items. The exemption allows the purchase or lease of copy machines that have the capacity to print 4,000 or more impressions per hour tax free. Users of the exemption are required to provide a completed Certificate of Exemption (Form ST-11) to the vendor.

Other states. According to a 1995 Virginia Tax report, 10 states provided exemptions similar to Virginia's at one time. A dozen other states allow the exemption if they can qualify as a manufacturing business or a printing manufacturer only. More updated information about states with a similar exemption was not available.

Industry trends. Like the demand for printed advertising materials, demand for copying and printing has decreased with the rise of digital communication and electric publications alternatives. Businesses increasingly transfer documents digitally via email, websites, and social media. The sector most closely associated with the high-speed electronic duplicator exemption is 'other business services, including copy centers' (NAICS 561439). Employment in this industry has declined faster in Virginia than in the U.S. (Figure F-4).

FIGURE F-4:
Other business services sector, which includes copy centers, has lost employment faster in Virginia than U.S.



SOURCE: Lightcast™

Out-of-state nuclear facility repair exemption

(§ 58.1-609.10(6))

The out-of-sate nuclear facility repair exemption allows for the tax-free purchase of tangible personal property used to repair or replace equipment at nuclear facilities licensed by the Nuclear Regulatory Commission that are located outside Virginia. The exemption was adopted in 2000.

Purpose. The exemption can be seen as supporting a strategic industry in Virginia and helping to maintain its interstate competitiveness. By exempting such purchases from sales and use tax, Virginia may encourage companies that specialize in nuclear facility repairs to establish operations in Virginia or to use Virginia as a hub for their procurement and logistical activities. It also helps to prevent the taxation of intermediate inputs.

Exempt items. Equipment and materials used for maintenance and repair of nuclear facilities, such as reactor services, maintenance and cleaning, valve maintenance and repair, steam turbine maintenance, and piping maintenance to ensure safe and efficient operation.

Beneficiaries. Companies that provide maintenance and repair on nuclear facilities. There is not a dedicated NAICS sector for these specialized services; they generally reside in the commercial and industrial (except automotive and electronic) repair and maintenance (NAICS 811310) industry.

Other states. Virginia is the only state with this exemption, according to Virginia Tax.

Industry trends. The nuclear energy industry has been shrinking in because of competing lower cost fossil fuel and renewable energy sources, the high costs of nuclear power plant construction, and

consumer safety concerns arising from nuclear energy plant accidents at Three Mile Island, Chernobyl, and Fukushima. Interest in nuclear energy has been rekindled recently because of international efforts to lower global carbon emissions and to satisfy the rising electricity demands of data centers, industry, and electric vehicles. Georgia built the first nuclear reactor in over three decades at Plant Vogte in Waynesboro, with two reactors becoming operational in 2023 and 2024. South Carolina's Santee Cooper electric utility has proposed reviving two mothballed nuclear products to provide electricity for new data centers, and Michigan officials have proposed restarting the Palisades Nuclear Power Plant. Microsoft has made a deal with Constellation Energy to reopen a reactor closed after the Three Mile Island accident to supply electricity to a new data center. In addition, some data center companies such as Google, Facebook, and Amazon have proposed designing and constructing small modular nuclear reactors on site to satisfy their planned expansions and energy needs.

Factors for joint subcommittee to evaluate tax preferences to consider. Virginia supports several initiatives that benefit the nuclear energy industry and may have more impact on fostering the industry than the exemption. The General Assembly established the Virginia Nuclear Energy Consortium (VNEC) in 2013 to foster collaboration among industry, higher education, and the public sector to establish Virginia as a hub for the nuclear energy industry. The VNEC seeks to promote growth in the industry by supporting R&D projects in nuclear technologies, workforce development, and industry engagement. The General Assembly established the Virginia Power Innovation Fund in 2023 with an introductory budget of $10 million to be administered by Virginia Energy. It was established in part to help create a Virginia nuclear innovation hub by providing competitive grants for R&D, workforce development programming, and site selection. The incentive could also be used to support the development of small modular reactor projects in the state. The General Assembly established the Virginia Clean Energy Innovation Bank in 2024 to incentivize through grants, loans, credit enhancements and other financing methods, qualified clean energy projects (including nuclear energy), with a first-year budget of $10 million. At the end of 2024, Virginia Energy and VEDP announced that Commonwealth Fusion Systems (CFS) was awarded a $1 million grant from the fund to locate the nation's first commercial nuclear fusion plant in Chesterfield County.

At least one other state has staked significant resources on developing a nuclear energy development and manufacturing hub. In 2024, Tennessee established a $50 million nuclear energy supply chain investment fund to fund projects that (a) manufacture components for nuclear energy testing and power generation, (b) design, develop, and build small modular reactors and advance reactors, (c) research and test new technology in nuclear fission and fusion, and (d) store and transport elements of the nuclear life cycle.

Taxi parts and radios exemption

(§ 58.1-609. 3(10))

The taxi parts and radios exemption allows taxi service companies to purchase certain essential items like vehicle parts and radios tax free. The exemption was adopted in 1984.

Exempt items. The exemption allows tax free purchases of automobile parts such as brakes, tires, meters, and dispatch radios. Users of the exemption are required to provide a completed Certificate of Exemption (Form ST-20) to the vendor.

Beneficiaries. The exemption applies only to taxicab operators and does not include limousine operators or contractors providing rideshare services like Uber or Lyft.

Purpose. The tax exemption reduces operational costs for taxi service providers. A 1995 Virginia Tax report stated the exemption was partially enacted to reduce attrition in state taxicab operations. Since some portion of taxicab company savings may be passed onto consumers in the form of lower fares, it might have a small effect on reducing fare costs for customers, some of whom may have fewer local public transportation options and/or be economically disadvantaged or physically disabled. Taxi services are also treated in a manner similar to common carriers, which includes sectors such as airlines and railroads that receive special tax exemptions and may not discriminate in terms of who they serve. In many metropolitan areas, taxicab services are regulated for service and affordability. Taxicab services generally serve the local market. Some taxi services offer travel for tourists, including trips to and from airports.

Industry trends. According to an industry representative, the taxi services industry was at its peak two decades ago when new technologies such as new dispatch technologies enhanced service quality and productivity. However, the industry has suffered significant attrition since then because of several factors. First and foremost, ride-sharing services such as Uber and Lyft have grabbed an increasing share of the taxi services market. Consumers have access to smart phone apps that offer greater ease, lower costs, and limited wait times for local transportation services. Drivers from these companies also face more limited regulations and government oversight and experience lower startup costs. Ride hailing services began to penetrate the Virginia market in 2014, moving from the U.S. West Coast to the East Coast initially without legal authority before laws permitting them were passed in 2015–2016. Taxi companies began to struggle shortly thereafter, resulting in early retirements and some operators liquidating their assets. An analysis of the disruption caused by ride-hailing on the taxi industry, found that taxi company exit rates increased and earnings dropped for taxi drivers, particularly low earning ones, after ridesharing was introduced to a city (Abraham et al, 2024). Exit rate impacts, however, were less severe for cities that regulated the number of taxis, such as New York City. The COVID-19 pandemic was the second major shock to the industry because of the drop in travel. Moreover, the increased telecommuting and work from home that became more permanent has reduced office activity and decreased demand for taxi services. An industry representative indicated that they were able to make adjustments to services and continue to operate, but ridership was significantly impaired and slow to come back. The industry experienced an additional exodus of workers, particularly as the industry competed with other service industries for labor. Consequently, the industry has shrunk to a fraction of its size two decades ago.

An industry representative indicated that much of its current ridership is centered on essential services to seniors, people with disabilities, and others with fixed or low incomes that are not well served by ride-hailing and public transit because of technological, financial, or physical limitations. Following the enactment of the federal Americans with Disabilities Act in the early 1990s, the taxi services industry placed more emphasis on providing transportation services for individuals with disabilities, and this consumer segment now constitutes a more important portion of its ridership.

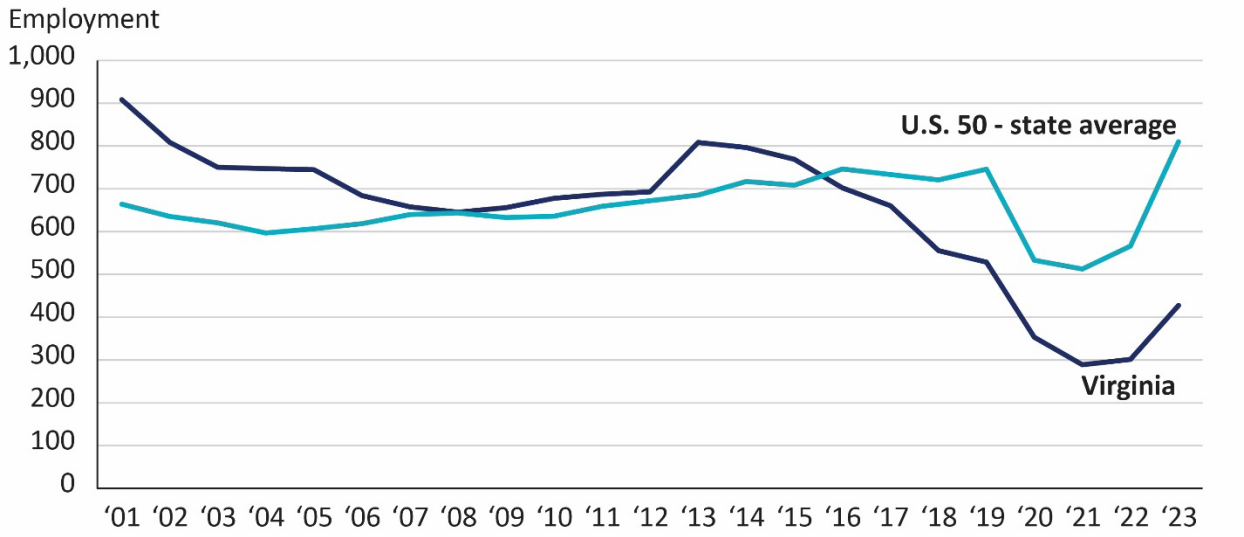
The industry is likely to encounter additional technological and competitive challenges. First, autonomous vehicles, air taxis, and artificial intelligence are set to disrupt transportation services in the future.

Expansion in public transit, such as plans for Virginia Railway Express and Amtrak services due to the Transforming Rail in Virginia initiative, could also have an impact on the industry since complementary public transit services such as buses and subways tend to benefit from shorter travel (IBIS 2024a).

Gauging the impact of ride hailing and the pandemic on taxi services activity is also difficult because of the reclassification of ride hailing contractors in employment statistics. Figure 5-1 shows employment for wage and salary employees (a small portion of industry employment because much employment consists of self-employed independent contractors) and was not initially affected by the inclusion of ride hailing contractors in federal employment statistics, though an adjustment in collection methods by BLS in 2023 began to affect this data source, too. Department of Motor Vehicle (DMV) registrations are a better indicator of industry activity changes. DMV records show 4,951 licensed taxicabs in Virginia in 2014. At the end of 2023, DMV reported 2,161 licensed taxicabs, a drop of 56 percent.

Given the caveats about changes in data measurement methods, the drop in Virginia employment appears to be more severe than in the U.S., where taxicab and ride-hailing services employment was less volatile until the COVID-19 pandemic (Figure F-5). The relatively steady employment figures in the U.S. may be due to the failure of ride-hailing services to penetrate taxicab service markets in smaller metropolitan and rural areas.

FIGURE F-5:
Virginia taxi service wage and salary employment has declined rapidly, while the U.S. average has not



SOURCE: Bureau of Labor Statistics Quarterly Census of Employment and Wages (Wage and salary employees)

Other states. According to a 1995 Virginia Tax report, several other states also offer taxicab exemptions for purchases of taxicab operators, including Indiana, Kansas, Massachusetts, Missouri, Nebraska, Ohio, Pennsylvania, and West Virginia. It could not be determined whether these states still

provided exemptions, or whether additional states do. Instead of stand-alone exemption statutes, some states may introduce the exemption by classifying taxicabs as common carriers, which are accorded certain parts or supply exemptions.

Factors for joint subcommittee to evaluate tax preferences to consider. Economic incentives are uncommon for the industry since it provides primarily local services, has relatively low entry barriers, and does not typically pay high wages and benefits. Due to the COVID-19 pandemic and its disruption to transit services, including taxi services, some states and localities provided temporary economic assistance for taxi services firms. For example, Massachusetts established the Taxicab, Livery, and Hackney Transportation Partnership Grants Program, which provided grants of up to $40,000 to eligible taxi, livery, and hackney operators to purchase products or services (e.g., dispatch systems, ride-hailing systems, safety enhancements such as PPE, and other equipment) that would increase their competitiveness or improve their safety.

Uniform rental and laundry businesses exemption

(§ 58.1-609. 3(8))

The uniform rental and laundry businesses exemption applies to certain purchases by an industrial processor engaged in the commercial leasing of laundered products (e.g., uniforms, towels, linens). This exemption was adopted in 1980.

Exempt items. The exemption applies to machinery and equipment (e.g., industrial washing machines, dryers, and ironing equipment), repair parts or replacements, and supplies and materials (e.g., uniforms, linens, detergents, solvents) used directly in maintaining and preparing textile products for rent or lease. It does not include tangible personal property used indirectly, such as office furniture and administrative supplies. Users must submit an exemption certificate (Form ST-10) to suppliers at the time of purchase.

Purpose. The exemption was established to provide uniform rental and laundry businesses an exemption on their purchases of machinery, parts, and supplies similar to that provided to the manufacturing industry. Before the exemption was enacted in 1980, uniform rental and laundry businesses were treated as non-manufacturing businesses and required to pay sales and use tax on inputs used in production. The primary purpose of this exemption is to reduce the cost burden on these businesses, thereby helping maintain competitive pricing, support operational efficiency, and contribute to local employment.

Other states. According to a 1995 Virginia Tax report, only three states (Colorado, Maryland, and Ohio) offered a similar exemption. Some states recognize industrial launderers as part of the manufacturing sector, which makes them eligible for the standard manufacturing input exemption.

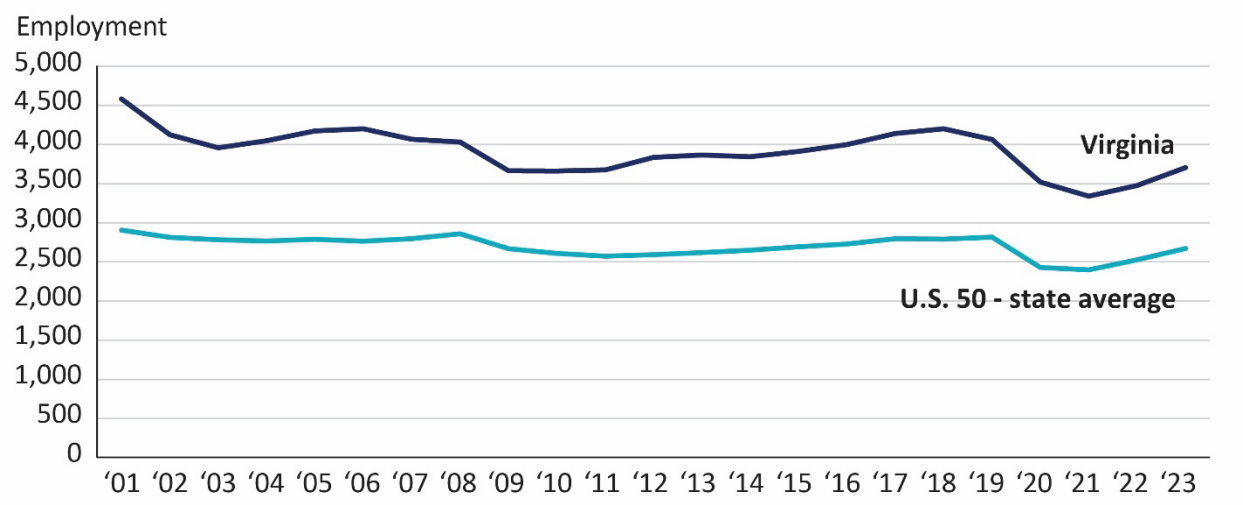
An industry representative indicated that they typically request the exemption from states since their products compete directly with textile and apparel single disposable manufacturers, many of whom are located outside the U.S. They also employ similar industrial processes to those required to finish those goods. Offering the exemption helps support businesses that utilize a local supply chain and promotes import substitution. Industry products also contribute to environmental sustainability

because they are reusable and reduce solid waste. Industrially laundered products are also more efficient and use less water than locally laundered textile products.

Beneficiaries. Companies that benefit from the exemption are mainly located in the linen supply (NAICS 812331) and industrial launderers (NAICS 812332) industries. These companies supply laundered items, such as uniforms, gowns, linens, and towels to different industries on a rental or contract basis.

Industry trends. Major industry customers include healthcare, hospitality and food services, and industrial establishments. Demand for industrial laundered products has generally grown in the recent decade (IBIS 2024e). The COVID-19 pandemic had a detrimental impact on industry operations and demand but quickly subsided. As the industry has become more efficient with the introduction of more capital and greater automation, employment in the sector has decreased (Figure F-6). Virginia employment in the sector decreased 19 percent from 2001 to 2023, more than twice the national rate of decline (7.9 percent decrease).

FIGURE F-6:
Industrial launders and linen supply employment has decreased faster in Virginia than in the U.S.



SOURCE: Lightcast™

Appendix G: Agency responses

As part of an extensive validation process, the state agencies and other entities that are subject to a JLARC assessment are given the opportunity to comment on an exposure draft of the report. JLARC staff sent an exposure draft of this report to the Virginia Economic Development Partnership, Virginia Department of Taxation, the secretary of commerce and trade, and the secretary of finance.

Appropriate corrections resulting from technical and substantive comments are incorporated in this version of the report. This appendix includes a response letter from the Virginia Economic Development Partnership and Virginia Department of Taxation.

COMMONWEALTH of VIRGINIA

Department of Taxation

May 23, 2025

Mr. Hal E. Greer, Director
Joint Legislative Audit and Review Commission
919 East Main Street, Suite 2101
Richmond, Virginia 23219

Dear Mr. Greer:

Thank you for the opportunity to review and comment on the exposure draft report: *Workforce and Industry Incentives, 2025*. We believe the report is well done and will be useful to the members of the General Assembly going forward. We have no comments.

Thank you again for the opportunity to review the draft report. Should you have any additional questions, please feel free to contact me.

Sincerely,

James J. Alex
State Tax Commissioner
Commonwealth of Virginia

c: The Honorable Stephen E. Cummings, Secretary of Finance
Kristin Collins, Deputy Tax Commissioner

VEDP | Virginia Economic Development Partnership

May 27, 2025

Mr. Hal E. Greer, Director
Joint Legislative Audit & Review Commission
919 East Main Street, Suite 2101
Richmond, VA 23219

Re: VEDP response to the draft JLARC report, *Workforce and Industry Incentives, Economic Development Incentive Evaluation Series*

Dear Mr. Greer:

Thank you for providing an opportunity for us to comment on the Joint Legislative Audit & Review Commission's (JLARC's) draft report, *Workforce and Industry Incentives, Economic Development Incentive Evaluation Series.*

The report provides a helpful overview of economic development incentives used by the Commonwealth to encourage workforce improvement and to support certain industries. Among other things, the report demonstrates the impact of two of VEDP's most important economic development incentive programs: the Virginia Jobs Investment Program (VJIP) and the Virginia Talent Accelerator Program.

A prior JLARC report entitled *Economic Development Incentives 2024: Spending and Performance* noted that VJIP is one of the state's most widely used incentives and that the program accounted for the largest share of jobs (39,304) and capital investment and other spending ($6.1 billion) associated with Virginia's economic development grant programs during the time of that study. One of the state's oldest incentive programs, VJIP encourages job creation and training through a post-performance incentive after new jobs are created.

To further improve VJIP's design while maintaining the relevance and competitiveness of the program for Virginia's diverse range of communities, we concur with JLARC's recommendations that call for considering the prevailing average annual wage as well as the economic distress level of the locality when determining whether to support economic development projects with VJIP.

The second VEDP-administered workforce incentive evaluated in the report is the Virginia Talent Accelerator Program, a world-class service-based incentive that provides workforce recruitment and training solutions that are fully customized to a company's unique operations, equipment, standards, and culture (as a service-based incentive, no funds are exchanged with the company). Ranked as the best (No. 1) state workforce training program in nation by *Business Facilities* magazine, the Talent Accelerator's "turnkey" solutions give Virginia a distinct advantage over rival states in the competition for job creation projects. Steve Oberfield, Vice President at Cambridge Pavers, Inc., which recently selected Danville for a new $47 million manufacturing facility that is projected to create 55 new, direct jobs, stated, "In

901 E. Cary Street, Suite 900
Richmond, Virginia 23219
VEDP.org

comparing Virginia to multiple states and multiple regions, the Talent Accelerator Program truly set Virginia apart at the top of the list." After choosing Virginia for another project, site selection consultant Brian Corde, Managing Partner at Atlas Insights, said, "We were looking at several states—Georgia, North Carolina, and Virginia. The deciding factor was Virginia's ability to deliver ready-trained workers. Their Talent Accelerator wasn't just filling seats; they were actively preparing people to succeed in our client's facility."

We concur with JLARC's recommendation for VEDP to establish a minimum capital investment threshold for the Talent Accelerator based on an analysis of the capital investments made by projects that have received assistance from the program.

While VEDP supports the use of advanced research and modeling techniques to evaluate the effectiveness of incentive programs, it is important to recognize potential limitations in these methodologies. In particular, the data set examined in the report for the Talent Accelerator was quite limited since the Talent Accelerator is a relatively new program. As a result, we believe the study likely underestimates the Talent Accelerator's competitive impact on securing economic development projects in Virginia as well as the program's corresponding economic benefits. We look forward to working with JLARC in future studies to determine the full value of the Talent Accelerator.

As always, we greatly appreciated the professionalism and engagement of the JLARC staff throughout the project and commend your team for its thoughtful analysis and reporting.

Sincerely,

Jason El Koubi
President & CEO

JLARC.VIRGINIA.GOV
919 East Main St. Suite 2101
Richmond, VA 23219