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Economic Development Incentives 2022

Spending and Performance

COMMISSION DRAFT

JLARC
JOINT LEGISLATIVE AUDIT AND REVIEW COMMISSION

JLARC staff

Hal E. Greer, Director

Kimberly Sarte, Associate Director for Ongoing Oversight and Fiscal Analysis
Ellen Miller, Chief Economic Development and Quantitative Analyst

Information graphics: Nathan Skreslet
Managing Editor: Jessica Sabbath

Economic analysis

Terance J. Rephann, Regional Economist
Weldon Cooper Center for Public Service

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jlarc.virginia.gov

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WHAT WE FOUND

- Virginia spent $3.2 billion on 87 economic development incentive programs from FY12 to FY21. This amounts to 1.6 percent of total general fund spending during this time. Total spending on incentives was $400 million in FY21. Incentive spending has increased since FY16 because of increased spending for the data center exemption and several other relatively new incentives.
- Seventy-two percent of incentive spending was for tax incentives such as sales and use tax exemptions ($1.6 billion), tax credits, and single sales apportionment for manufacturers and data centers ($650 million). The remaining 28 percent was spent on grants ($905 million) and other incentives such as loans and gap financing programs ($36 million).
- Economic benefits, such as increases in employment, gross domestic product, and personal income, vary widely by type of economic development incentive program.
- Grant programs have substantially higher economic benefits than tax incentives, when benefits are assessed per $1 million spent. Tax credits, in particular, have the lowest economic benefits and are ineffective in generating economic benefits for the state compared to grants. However, Virginia has historically spent more on tax incentives than on grants.
- Grant programs have higher economic benefits because they typically are discretionary, require strict performance outcomes, and target projects in export-base industries that have high employment multipliers and pay high wages.
- Collectively, grant programs awarded $1.9 billion to 5,000 projects between FY12 and FY21. Grant awards have been relatively stable over time except for a substantial increase in FY19 primarily because of the $750 million custom grant award for Amazon HQ2.
- Less than half of the $1.9 billion in grant awards was paid or ‘spent’ between FY11 and FY20, because nearly $900 million in custom awards for Amazon HQ2 and five other companies are not scheduled to be paid until after FY21.

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 selected individual incentives. (See Appendix A: Study mandate.) JLARC contracted with the Weldon Cooper Center for Public Service to perform the analysis for both reports.

This report is the fifth in the series of overall spending and business activity and focuses on incentives that were provided between FY12 and FY21.

Grant spending, and thus total incentive spending, will increase substantially as these custom grant awards are paid.

- Completed projects receiving grant funds created nearly 70,000 jobs and over $17 billion in capital investment or other spending. The majority of these projects met their capital investment goals, but only one-quarter met their job creation goals.

Economic Development Incentives 2022

Virginia provides economic development incentives to encourage businesses to locate or expand their operations in the state 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 review spending on and performance of economic development incentives such as grants, tax preferences, and other assistance. (See Appendix A.) JLARC contracted with the University of Virginia's Weldon Cooper Center for Public Service to perform the evaluation.

This report is the sixth in a series of annual reports about Virginia's economic development incentives, trends in state spending on incentives, and performance of incentive programs. Every other year the reports in this series include information about the economic benefits of total spending on economic development incentives. This report is the third in which information on economic benefits is included.

This report provides summary information on 87 economic development incentive programs, including grants, tax preferences, business loans, and gap financing. The incentive programs covered in this report are funded by the state, provided funding for businesses between FY12 and FY21, and have a primary purpose of promoting economic activity through location or expansion of businesses. Businesses may also benefit from a variety of other state grants, tax credits, and exemptions for purposes other than economic development; these programs are not included in this report.

For purposes of this report, **incentives spending** refers to (1) actual state expenditures in the form of grant awards or other financing and (2) estimated tax expenditures, in the form of forgone revenue, through tax credits, sales and use tax exemptions, or other incentives.

For most grants, spending is allocated to the fiscal year in which awards were approved. For custom grants, spending is allocated to the fiscal year in which grant payments are made to the company.

For refundable tax credits, such as the film credit, spending may reflect actual expenditures rather than forgone revenue.

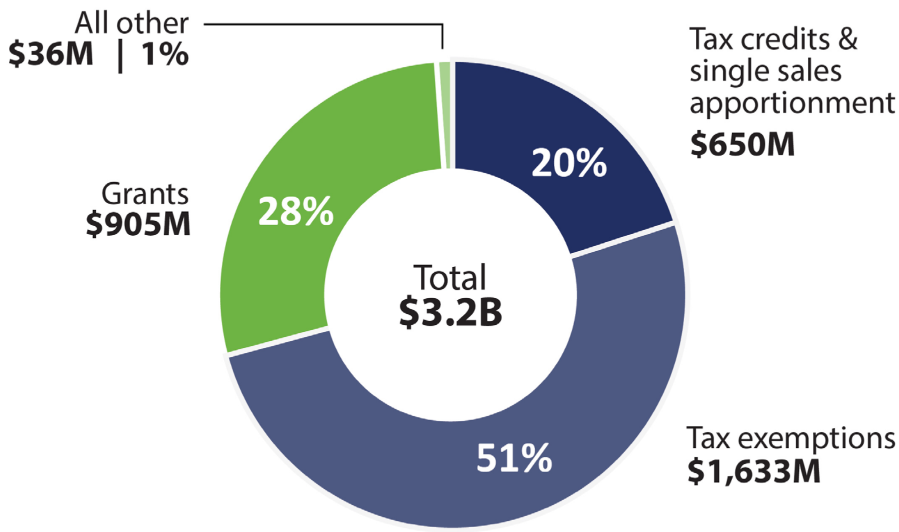
See Appendix B for more information on methods used to estimate spending for each program.

State spent $3.2 billion on incentives FY12–FY21

Virginia spent $3.2 billion on 87 economic development incentive programs over the past 10 fiscal years (Figure 1), for an average of $320 million per year. Nearly all incentives are funded by the state general fund, with the exception of incentives provided by the Tobacco Region Revitalization Commission and several transportation infrastructure incentives. Spending on incentives represented approximately 1.6 percent of total general fund spending between FY12 and FY21. As in past reports in this series, the majority of spending on incentives was forgone revenue from tax incentives. Sales and use tax exemptions make up 51 percent of spending, and tax credits and single sales apportionment for manufacturers together make up 20 percent of spending. Almost all the remaining spending was for grants.

Spending is concentrated in a small number of incentives. Ten incentives accounted for two-thirds of the spending on incentives between FY12 and FY21 (Table 1). The largest incentive during the 10-year period—the Data Center Exemption—accounts for almost one-third of spending on incentives and is nearly five times larger than the next-largest incentive, the Railroad Common Carriers Exemption. Together, these two exemptions provided more than $1.2 billion in retail sales and use tax exemptions to businesses in capital-intensive sectors that make large purchases of equipment. Two of the 10 largest incentives are coal-related tax credits for coal mining companies and electricity producers that use Virginia-mined coal. Together, these two credits provided $278 million in income tax savings to these businesses during the 10-year period. Savings from these credits will decline in future years and eventually cease because the 2021 General Assembly eliminated both credits effective January 1, 2022.

FIGURE 1
Nearly three-fourths of spending on incentives was for tax incentives (FY12–FY21)



SOURCE: Weldon Cooper Center analysis of economic development incentive programs.
NOTE: Estimates may not sum because of rounding. Adjusted for canceled projects, recaptures, and award reductions. Exemptions exclude the 1 percent sales tax for localities and the additional amounts collected in localities with higher rates, such as Northern Virginia and the Historic Triangle. For custom grants, actual payments are allocated to the fiscal year when they were paid. Estimate for single sales apportionment includes both manufacturer and data center estimates.

TABLE 1
Ten incentives are responsible for two-thirds of spending (FY12–FY21)

	10-year period (FY12–FY21)	
Incentive	**Spending**	**% of spending**
Data Center Exemption	$1,014M	31%
Railroad Common Carriers Exemption	206	7
Coalfield Employment Enhancement Tax Credit	187	7
Manufacturers Single Sales Apportionment	164	5
Commonwealth's Opportunity Fund	146	5
Real Property Investment Grant	109	4
Airline Common Carriers Exemption	95	4
Virginia Coal Employment and Production Incentive Tax Credit	91	3
Tobacco Region Opportunity Fund	89	3
Tobacco Region Megasite Grant	72	3
Subtotal	**$2,172M**	**67%**
All others	$1,052M	33%
TOTAL	**$3,224M**	**100%**

SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Excludes several tax preferences for which data was not available. For custom grants, payments are allocated to the fiscal year when they were paid. Adjusted for canceled projects, recaptures, and award reductions. Exemptions exclude the 1 percent sales tax for localities and, in most cases, the additional amounts collected in some localities, such as Northern Virginia and the Historic Triangle. (See Appendix D for a description and Appendix E for spending for all incentives.)

Eight of these incentives were also among the top incentives for spending in FY21, with the Data Center Exemption by far the largest incentive that year ($117 million in spending or 29 percent of spending). Two newer incentives—the "custom" Semiconductor Manufacturing Grant for Micron ($50 million in spending in FY21) and the Major Research and Development Tax Credit ($12 million in spending FY21)—replaced the Virginia Coal Employment and Production Incentive Tax Credit and the Tobacco Region Megasite grant as top incentives in FY21. (See Appendix E for more information on spending on each incentive by year.)

Incentives have increased in number and spending

The state has increased its economic development incentive programs over time. The oldest is the Economic Development Access Program—a grant program designed to improve transportation access for industrial sites—which was adopted in 1956. In the 33 years between 1956 and 1989, the state adopted only 14 incentives that are still active. Since 1989, the state has adopted an additional 73 incentives, and more than a third of the currently active incentives were adopted since 2010.

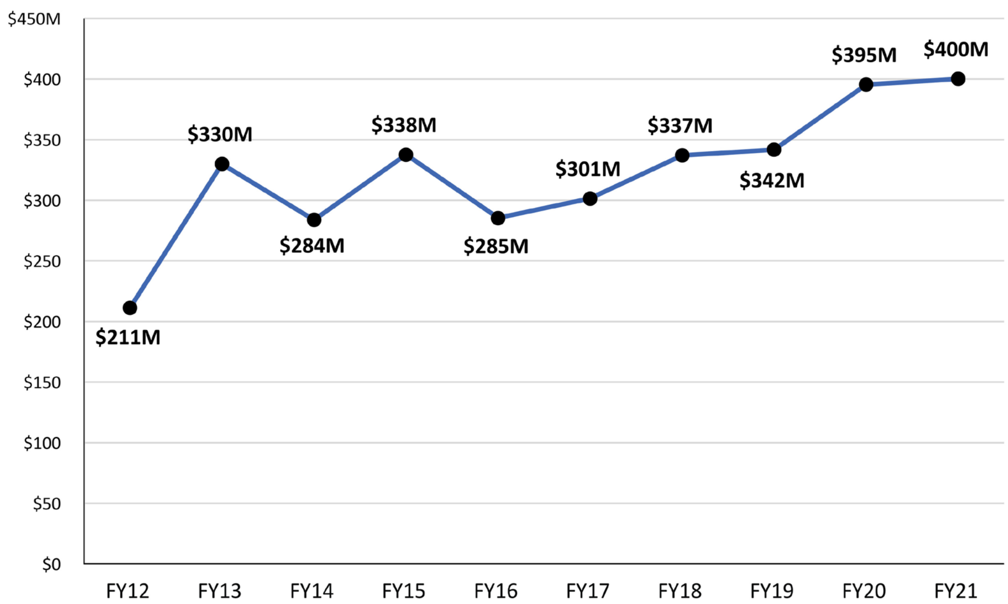
The state has also started adopting more customized performance grants, which are designed to attract specific companies to locate or expand in the state. Nearly half of the incentive programs that have been adopted in the past five fiscal years have been customized performance grants:

- Technology Development Grant Fund (Microsoft, FY21),
- Truck Manufacturing Grant Fund (Volvo, FY21),
- Advanced Production Grant Program and Fund (Morgan Olson, FY21),
- Pharmaceutical Manufacturing Grant Program (Merck, FY21),
- Major Headquarters Workforce Grant (Amazon HQ2, FY20),
- Semiconductor Manufacturing Grant (Micron, FY20),
- Special Workforce Grant Fund (Amazon Web Services, FY19), and
- Advanced Shipbuilding Production Facility Grant Program (Newport News Shipbuilding, FY17).

Overall, total spending on economic development incentives increased 89 percent between FY12 and FY21. Spending levels fluctuated earlier in the time period before steadily increasing after FY16 (Figure 2). This overall increase is more than twice the increase in state general fund spending during that time period (36 percent) but similar to the increase in total state spending (86 percent).

Several newer incentive programs are responsible for much of the growth in incentive spending. The Data Center Exemption was first claimed in FY10 with an estimated $3 million in exemptions and has increased to more than $100 million annually since FY18. Single sales income tax apportionment became available for manufacturers in FY15. The incentive reduced income tax revenue by an estimated $2 million that year and has increased to more than $20 million annually. The Major Research and Development Tax Credit was adopted in 2016 and contributed to an increase in incentive spending between FY19 and FY20. Recent custom grants have been major contributors to spending increases since FY18, rising from no expenditures that year to $61 million in FY21.

FIGURE 2
Spending on incentives fluctuated annually before FY16 but has increased steadily since ($M)



SOURCE: Weldon Cooper Center analysis of economic development incentive programs.
NOTE: Adjusted for canceled projects, recaptures, and award reductions. Amounts differ from earlier Economic Development Incentives reports because of project cancelations, recaptures for nonperforming projects, and adjusted reporting on completed projects. For custom grants, payments are allocated to the fiscal year when they were paid. Not adjusted for inflation. The trend is similar if adjusted for inflation.

Custom grants are periodically offered to attract specific large companies to the state. The state's typical package of incentives (grants, tax credits, exemptions, etc.) are relatively modest compared with a custom grant. For example, grant awards for non-custom projects were an average of $185,000 per project between FY12 and FY21 compared with custom grants, which were an average of $107M per project.

Incentive spending often fluctuates annually because of program changes or large or atypical awards. Two programs, the Virginia Coal Employment and Production Incentive Tax Credit and the Data Center Exemption, contributed to the spike in incentives in FY13. Two-thirds ($59.5 million) of the total Virginia Coal Employment and Production Incentive Tax Credit awards between FY11 and FY20 were awarded in FY13 when a substantial amount of carryover credits were claimed on tax returns. The total amount of spending on the Data Center Exemption increased $53 million in FY13 after co-location data centers, which are operated by a landlord and may have multiple data centers as tenants, were allowed to use the exemption. Spending on the Data Center Exemption and the single sales apportionment for manufacturers increased in FY15, contributing to the spike in total incentive spending that year. In FY20, Micron received a $20 million custom grant payment contributing to the 20 percent increase in incentive spending that year. Spending on incentives remained relatively flat in FY21 because estimated spending on the Data Center Exemption declined, offsetting spending growth on other incentives.

Several programs have experienced sizable declines in spending since FY15, although these declines have been largely offset because of increased spending for other incentives. The Tobacco Region Megasite grant program awarded $18 million annually for

Economic development grants are financial incentives provided to businesses in return for locating in the state or expanding business activity. Some grants are discretionary, which means that the state can negotiate the terms of the grant with the business. Other grants are automatically awarded if the business meets the minimum requirements. Grants are not repaid as long as businesses meet program requirements.

Several programs that are not commonly identified as grant programs are included in this category because they provide financial assistance to businesses (or to a third party for their benefit). These programs include the Commonwealth Research Commercialization Fund and Virginia Leaders in Export Trade (VALET) Program.

the development of industrial parks between FY11 and FY15, but very little has been awarded since then, and the fund is nearly depleted. Estimated tax savings from the Coalfield Employment Enhancement Tax Credit also declined from $28.4 million in FY15 to $7.91 million in FY20. These declines will continue because the tax credit was eliminated effective January 1, 2022.

Approximately 5,000 projects were awarded $1.9 billion in grants FY12–FY21

Even though sales and use tax incentives—particularly exemptions—have historically had a larger overall impact on the state budget, Virginia's grant programs are the most widely recognized economic development incentive. Custom grants in particular receive considerable media attention because they are provided to business location or expansion projects promising to make substantial job creation and capital investment. For example, Virginia's $750 million custom grant award for Amazon to locate its East Coast headquarters in Virginia received national attention in fall 2018 and early 2019. Grant payments are scheduled to begin in FY26 and end in FY43. To receive the full award, Amazon must create at least 37,850 jobs and make a capital investment of at least $2 billion.

Collectively, Virginia's economic development incentive grant programs—which are typically funded with general funds with some exceptions—awarded $1.9 billion to 4,975 projects between FY12 and FY21 (Table 2). Eleven of the 39 grant programs each provided more than $30 million in awards during the time period. For most grant programs, awards were also paid out during the 10-year period. However, less than half of the $1.9 billion in grant awards was paid out or 'spent' between FY12 and FY21 because nearly $900 million in custom awards for Amazon HQ2, Microsoft, Newport News Shipbuilding, Amazon Web Services, Morgan Olson, Volvo, and Merck are not scheduled to be paid out until after FY21. Spending on grants, and thus total incentives, will increase substantially in the future as these custom grant awards are paid.

TABLE 2
Grant programs made approximately 5,000 awards totaling $1.9 billion (FY12–FY21)

	Total FY12–FY21		Annual average	
Program	**Award amount**	**# of awards**	**Award amount**	**# of awards**
Major Headquarters Workforce Grant (Amazon HQ2) [a]	$750.0M	1	n.a.	n.a.
Commonwealth's Opportunity Fund	183.9	317	$18.4M	32
Tobacco Region Opportunity Fund	153.3	278	15.3	28
Real Property Investment Grant (Enterprise Zone)	108.5	1,581	10.9	158
Tobacco Commission Megasite Grant	84.0	26	8.4	3
Virginia Jobs Investment Program	82.7	804	8.3	80
Semiconductor Manufacturing Grant Fund (Micron) [a]	70.0	1	n.a.	n.a.

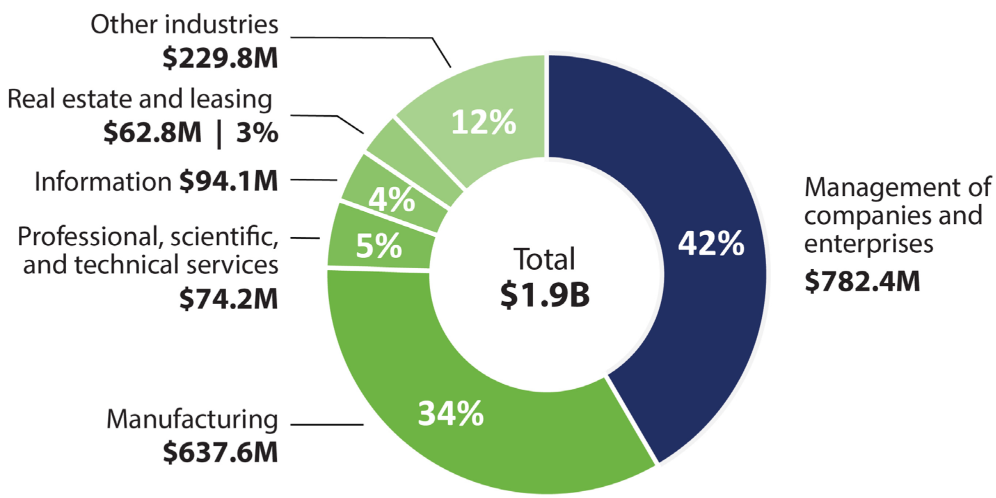
Program	Total FY12–FY21 Award amount	Total FY12–FY21 # of awards	Annual average Award amount	Annual average # of awards
Virginia Investment Partnership Grant	59.3	70	5.9	7
Transportation Partnership Opportunity Fund	46.1	14	4.6	1
Advanced Shipbuilding Production Facility Grant (Newport News Shipbuilding) [a]	46.0	1	n.a.	n.a.
Governor's Motion Picture Opportunity Fund	38.6	46	3.9	5
Virginia Economic Development Incentive Grant	34.3	9	3.4	1
Advanced Shipbuilding Training Facility Grant (Newport News Shipbuilding) [a]	32.8	1	3.3	n.a.
Job Creation Grant (Enterprise Zone)	26.1	566	2.6	57
Economic Development Access Program	23.4	40	2.3	4
Technology Development Grant Fund (Microsoft) [a]	22.5	1	n.a.	n.a.
Commonwealth Research Commercialization Fund [b]	16.8	262	1.7	26
Truck Manufacturing Grant (Volvo) [a]	16.5	1	n.a.	n.a.
GO Virginia (site development projects)	10.6	13	2.1	3
Special Workforce Grant Fund (Amazon Web Services) [a]	10.5	1	5.3	1
Rail Industrial Access Program	10.4	29	1.0	3
Agriculture and Forestry Industries Development Grant	9.0	103	1.0	11
Pharmaceutical Manufacturing Grant Program (Merck) [a]	7.5	1	n.a.	n.a.
Advanced Production Grant Program and Fund (Morgan Olson) [a]	7.0	1	n.a.	n.a.
Small Business Jobs Grant Fund Program	6.7	111	0.8	14
Port of Virginia Economic and Infrastructure Grant	5.5	20	0.7	3
VALET Program	5.4	243	0.5	24
Virginia Talent Accelerator Program [c]	4.8	19	2.4	10
Small Business Investment Grant Fund	4.4	89	0.6	11
Trade Show Assistance Program	2.8	313	0.6	63
Virginia Business Ready Sites Program	1.6	13	0.3	3
All programs	**$1,881M**	**4,975**	**$583**	**551**

SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Includes all awards and amounts *prior* to recaptures, cancelations, or reductions. For this reason, amounts for the Tobacco Region Opportunity Fund, Commonwealth's Opportunity Fund, and Virginia Jobs Investment Program are higher than amounts shown in Table 1. Total award amounts for custom grants are shown. The Small Business Jobs Grant Fund Program was eliminated by the 2020 General Assembly.
[a] These grants provide custom one-time awards that are or will be paid out over several years based on performance. The $32.5 million Advanced Shipbuilding Training Facility Grant has been fully paid. [b] In 2020, the Commonwealth Research Commercialization Fund was combined with other programs to become the Commonwealth Commercialization Fund. [c] The Virginia Talent Accelerator Program was created in 2019 and began making awards in FY20. Its value is estimated and represents the internal cost of the accelerator services at the time of announcement.

Grant awards targeted corporate headquarters and manufacturing sectors and urban localities

Over three-quarters of grant award amounts were directed to corporate headquarters or manufacturers between FY12 and FY21 (Figure 3). Forty-two percent of grant awards were directed to businesses in the corporate headquarters sector, almost all of which was the sizable custom grant award for Amazon HQ2. Another third was directed to businesses in the manufacturing sector. The manufacturing sector is commonly represented because grant programs generally target companies in "basic," or export-base industry sectors, which export at least half their goods or services outside the state. Targeting these businesses is desirable because they bring new revenue into the state. Corporate headquarters is also an export-base industry sector, but until FY20, the state generally provided fewer and smaller grants for headquarters locations or expansions.

FIGURE 3
Three-quarters of grant award amounts were directed to corporate headquarters and manufacturers (FY12–FY21)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: The "other industries" category includes businesses in a variety of sectors such as agriculture and forestry, construction, utilities, finance and insurance, wholesale or retail trade, transportation and warehousing, and other service sectors. Estimates may not sum because of rounding.

Geographically, the largest amount of grant awards went to urban localities, such as Arlington County, Newport News, and Fairfax County. Several less populated counties within the Tobacco Region—such as Henry County and Greensville County—also received large amounts. Ten localities received approximately 69 percent of the total amount awarded for the period (Table 3).

TABLE 3
Businesses in 10 localities received 69 percent of grant awards (FY12–FY21)

Locality	Amount awarded	% of total amount	# awards	% of total awards
Arlington County	$792M	42.1%	88	1.8%
Newport News City	120	6.4	273	5.5
Fairfax County	77	4.1	258	5.2
Manassas City	71	3.8	16	0.3
Richmond City	61	3.3	454	9.1
Henry County	37	2.0	130	2.6
Brunswick County	34	1.8	12	0.2
Pittsylvania County	34	1.8	76	1.5
Danville City	33	1.7	132	2.7
Greensville County	33	1.8	19	0.2
Subtotal	**$1,291M**	**69%**	**1,458**	**29%**
All others	$590M	31%	3,517	71%
TOTAL	**$1,881M**	**100%**	**4,975**	**100%**

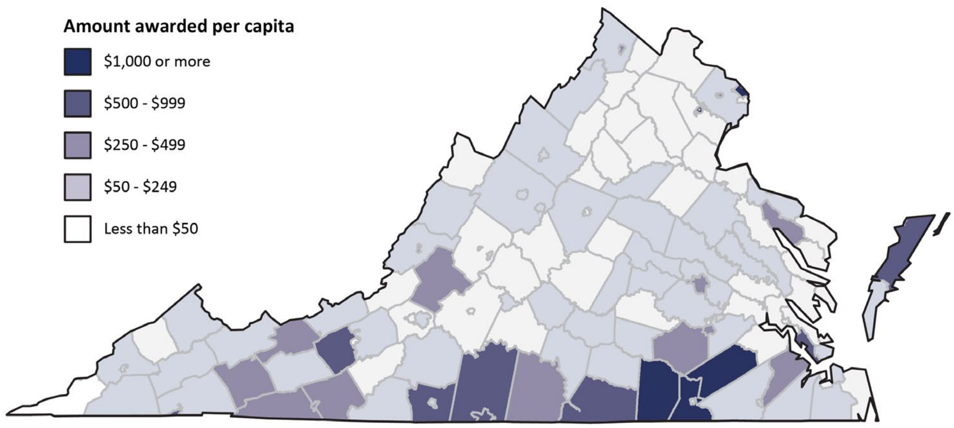
SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Localities were not assigned to 17 Governor's Motion Picture Opportunity Fund projects because filming occurred in multiple locations.

Businesses in urban localities in Northern Virginia and rural localities in the southern and eastern part of the state received a large proportion of grant funding, relative to population size (Figure 4). Businesses in the Northern Virginia Regional Commission service area (the counties of Arlington, Fairfax, Loudoun, and Prince William and the cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park) received approximately 51 percent of all economic development incentive grant awards. Businesses in Tobacco Region localities received approximately 18 percent of all economic development grant awards, largely because of the contributions of the Tobacco Commission's Tobacco Region Opportunity Fund and Megasite Grant programs. The highest *per capita* award amounts were in

- Arlington County ($3,297) for the location of Amazon HQ2;
- Greensville County ($2,891) for development of the Mid-Atlantic Advanced Manufacturing Center;
- Brunswick County ($2,115) for the location of a Dominion Power gas power plant that received $30 million in financial assistance;
- Manassas City ($1,746) for the Micron expansion; and
- Sussex County ($1,210) for development of a Tobacco Commission-funded megasite.

(See Appendix F for maps of the regional distribution of grant awards, overall and per capita.)

FIGURE 4
Awards per capita are concentrated in Arlington, Manassas City, and rural localities in Southern and Eastern Virginia (FY12–FY21)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants.

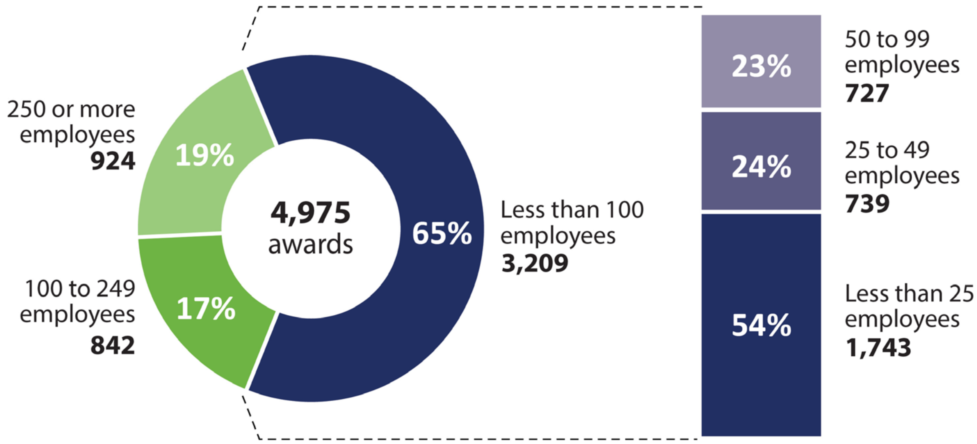
The award amounts per capita have a moderately positive correlation with the local unemployment rate (excluding the uniquely large Amazon HQ2 custom grant in Arlington), indicating that more funds are generally provided to businesses in localities that are economically disadvantaged. The number of awards per capita has an even higher positive correlation with the local unemployment rate.

Majority of grant projects were for business locations that had fewer than 100 employees at the time of the award

Sixty-five percent of the grant awards between FY12 and FY21 went to business locations that had fewer than 100 employees at the time the awards were made (Figure 5). Of this group, 54 percent were for business locations with fewer than 25 employees. These businesses received grant awards from programs, such as the Small Business Investment Grant or Commonwealth Research and Commercialization Fund, which typically make awards to start-up businesses with 10 or fewer employees, on average. These projects, however, represented only 16 percent of grant award amounts.

In contrast, 19 percent of grant awards were for large businesses with 250 or more employees, and these projects accounted for more than two-thirds of grant award amounts. Custom grants and four other grant programs—the Transportation Partnership Opportunity Fund, Virginia Investment Partnership Grant, Virginia Economic Development Incentive Grant, and Port of Virginia Economic and Infrastructure Grant—tend to make awards to business locations with 250 employees or more. (See Appendix G for the average employment size of grant recipients by program.)

FIGURE 5
Majority of grant recipients were for business locations with fewer than 100 employees (FY12–FY21)



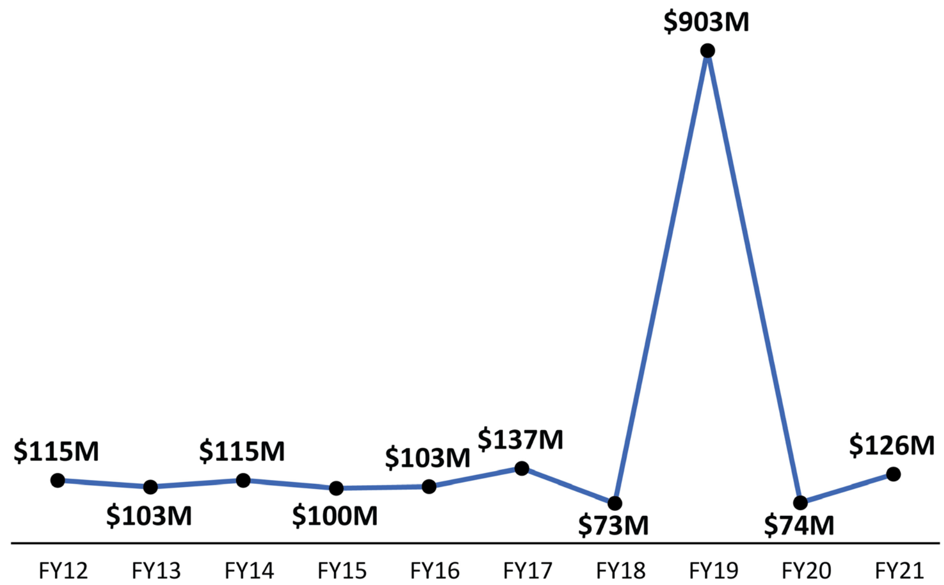
SOURCE: Weldon Cooper Center analysis of economic incentive grant awards.
NOTE: Employment records were matched with 2,973 of the 4,975 awards (60 percent) and $1.3 billion of $1.9 billion (70 percent) in total awards. The numbers and percentages shown in the figure reflect a weighted distribution of awards and amounts using information from the matched records.

Many businesses have operations in multiple **locations**. Grants and other incentives are often provided to projects that occur at a specific business location.

Grant awards have been relatively stable over time, except for a substantial increase in FY19 because of large custom grant awards

Grant awards have generally been stable over time, other than a substantial increase in FY19 because of large custom grant awards for Amazon HQ2, Amazon Web Services, and Micron that totaled $830.5 million (92 percent of total grant awards, Figure 6). Before and after FY19, annual grant awards fluctuated within a much narrower range. FY17 was the second highest year for awards between FY12 and FY21. In FY17, Newport News Shipbuilding received a custom grant award of $46 million from the Advanced Shipbuilding Production Facility Grant. Awards increased in FY21 because of custom grants for Microsoft and Volvo totaling $39 million. (See Appendix E for grant awards by program.)

FIGURE 6
Grant awards have been relatively stable over time, except for a substantial increase in FY19 because of large custom grant awards



SOURCE: Weldon Cooper Center analysis of economic incentive grant awards.
NOTE: Adjusted for canceled projects, recaptures, and award reductions. Amounts differ from earlier Economic Development Incentives reports because of project cancelations, recaptures for nonperforming projects, and adjusted reporting on completed projects. Sizable custom grants were awarded to Amazon HQ2 ($750 million), Micron ($70 million), and Amazon Web Services ($10.5 million) in FY19. Not adjusted for inflation. (The trend is the same if adjusted for inflation.)

Programs vary in amount awarded per job created and level of business investment

The size of grant awards varied widely by program (Table 4). Awards ranged from an average high of $3.8 million to a low of $8,909 per project, excluding the custom grant awards. Custom grant awards—which tend to be much larger—ranged from $7.0 million to $750 million.

The size of grant awards also varied when compared with the number of jobs created or investment made (Table 4). Grant programs require projects to meet certain minimum requirements to be eligible for grant funding. These minimum requirements vary based on program goals, but the most common are job creation and some form of business investment or spending in Virginia. The average grant award per expected job for Virginia projects was $6,832 between FY12 and FY21, but it ranged from a high of $63,291 per job (custom grant for Micron) to a low of less than $1,000 (Virginia Jobs Investment Program and Small Business Jobs Grant Fund). The average grant award for capital investment or additional spending was $39 per $1,000 spent and ranged from a high of $3,516 (custom grant for Amazon HQ2) to a low of $5 (Agriculture and Forestry Industries Development Grant).

TABLE 4
Average grant awards by program varied widely (FY12–FY21)

	Average award amount per		
Program	**Project**	**$1,000 in spending or investment in Virginia (expected)**	**Job created in Virginia (expected)**
Custom grants			
Semiconductor Manufacturing Grant (Micron II)	$70,000,000	$23	$63,291
Pharmaceutical Manufacturing Grant (Merck)	7,500,000	8	49,342
Advanced Shipbuilding Production Facility Grant	46,000,000	61	46,000
Advanced Shipbuilding Training Facility Grant	32,777,745	109	32,778
Truck Manufacturing Grant (Volvo)	16,500,000	42	21,236
Major Headquarters Workforce Grant (Amazon HQII)	750,000,000	375	19,815
Technology Development Grant (Microsoft)	22,500,000	3,516	15,000
Advanced Production Grant (Morgan Olson)	7,000,000	121	9,957
Special Workforce Grant (Amazon Web Services)	10,500,000	125	7,000
Average, custom projects	**$106,975,305**	**$127**	**$21,119**
All other grants			
Transportation Partnership Opportunity Fund	$3,294,708	$91	$17,612
Economic Development Access Program	585,728	210	9,319
Rail Industrial Access Program	357,302	36	9,154
Virginia Investment Partnership Grant	846,429	13	8,778
Small Business Investment Grant Fund	49,957	213	6,481
Virginia Economic Development Incentive Grant	3,811,111	66	5,791
Tobacco Region Opportunity Fund	551,548	19	5,030
GO Virginia (site development projects)	812,959	106	3,605
Commonwealth’s Opportunity Fund	580,048	14	3,584
Agriculture and Forestry Industries Devel Grant	87,135	5	2,906
Port of Virginia Economic and Infrastructure Grant	274,550	n.a.	2,070
Job Creation Grant (Enterprise Zone)	46,166	n.a.	1,891
Virginia Talent Accelerator Program	251,499	n.a.	1,279
Virginia Jobs Investment Program	102,804	8	878
Small Business Jobs Grant	60,464	25	848

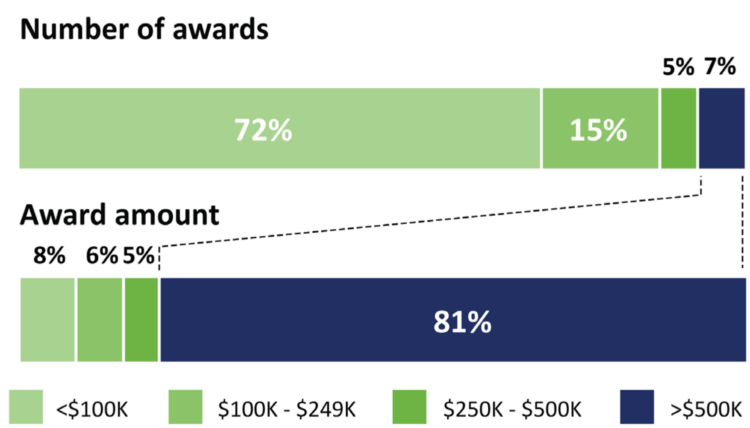
Program	Average award amount per Project	$1,000 in spending or investment in Virginia (expected)	Job created in Virginia (expected)
Commonwealth Research Commercialization Fund	64,181	228	n.a.
Governor's Motion Picture Opportunity Fund	$838,943	n.a.	n.a.
Real Property Investment Grant (Enterprise Zone)	68,659	$44	n.a.
Tobacco Commission Megasite Grant	3,229,161	n.a.	n.a.
Trade Show Assistance Program	8,909	n.a.	n.a.
VALET Program	22,284	n.a.	n.a.
Virginia Business Ready Sites Program	124,776	n.a.	n.a.
Average, noncustom projects	**$184,891**	**$22**	**$3,997**
Average, all projects	**$378,079**	**$39**	**$6,832**

SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Expected jobs and spending or investment were used for programs that awarded grants prior to when project performance began. *Actual* jobs and spending or investment were used for programs for which performance already occurred prior to projects receiving a grant award. Average award amounts are calculated using total spending across programs divided by the total number of projects, amount of expected capital investment, and expected jobs across programs. The Small Business Jobs Grant Fund Program was eliminated by the 2020 General Assembly.
n.a. indicates that job creation or investment is not among the criteria considered for obtaining the grant.

From FY12 to FY21, only 7 percent of awards were more than $500,000. However, these larger awards accounted for 81 percent of the grant funding (Figure 7). In fact, the seven custom grant awards alone accounted for 51 percent of the grant funding.

The **70,000 jobs and $17.1 billion in capital investment or other spending** are unduplicated amounts, because many projects receive more than one grant. For example, Navy Federal Credit Union received a Commonwealth's Opportunity Fund grant and Virginia Jobs Investment Program grant to create 1,400 jobs and make a $100 million capital investment in Frederick County.

FIGURE 7
Seven percent of grant awards accounted for over 80 percent of total grant funding (FY12–FY21)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Number of grants awarded is 4,975. Total amount awarded is $1.9 billion (not adjusted for cancelations, recaptures, and refunds).

Completed projects created nearly 70,000 jobs and over $17 billion in business investment and spending

Projects that received grant awards between FY12 and FY21 and completed their location or expansion project (including those that did not perform) collectively created an estimated 70,000 jobs and $17.1 billion in capital investment or other spending (Table 5). Completed projects that received Virginia Jobs Investment Program grants accounted for the largest share of jobs (44,351) and capital investment and other spending ($7.4 billion). Projects funded through the Commonwealth's Opportunity Fund ranked second in job creation (19,588 jobs) and business spending ($6.6 billion).

TABLE 5
Completed projects created nearly 70,000 jobs and over $17 billion in business spending or investment (FY12–FY21)

Program	# of projects	Spending or investment ($M)	Jobs created
Virginia Jobs Investment Program	699	$7,394	44,351
Commonwealth's Opportunity Fund	183	6,605	19,588
Job Creation Grant (Enterprise Zone)	566	0	13,818
Tobacco Region Opportunity Fund	179	2,147	6,255
Small Business Jobs Grant Fund Program	105	1	2,786
Port of Virginia Economic and Infrastructure Grant	20	0	2,653
Advanced Shipbuilding Training Facility Grant	1	358	1,520
Agriculture and Forestry Industries Devel. Grant	39	651	586
Virginia Investment Partnership Grant	18	825	515
Transportation Partnership Opportunity Fund	11	15	6
Commonwealth Research Commercialization Fund	200	55	n.a.
Economic Development Access Program	20	49	n.a.
Governor's Motion Picture Opportunity Fund	41	337	n.a.
Rail Industrial Access Program	21	188	n.a.
Real Property Investment Grant (Enterprise Zone)	1581	2,482	n.a.
Small Business Investment Grant Fund	1	0	n.a.
Tobacco Commission Megasite Grant	10	0	n.a.
	Total (duplicated):	**$21,108**	**92,078**
	Total (unduplicated):	**$17,172**	**69,738**

SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Completed projects represented about $475 million in total awards across programs. Some grant programs such as the Major Eligible Employer and some custom grants had no completed projects during this time period. Jobs are not counted for the Governor's Motion Picture Opportunity Fund program because they are not permanent full-time jobs. Many projects receive grants from more than one program. No unique identifiers exist to easily identify projects that received grants from multiple programs. The unduplicated number of jobs and investment or spending is an estimate based on a review of projects with similar business names, locations, time periods, and other factors. VALET and Trade Show Assistance programs (270 and 204 completed projects, respectively) are not included in the table because their goals are to increase a company's international sales, and job creation and capital investment are not reported by program participants. The one completed Small Business Investment Grant project did not perform and funding was recaptured. n.a. indicates that job creation or investment is not one of the criteria for receiving the grant.

Majority of completed projects met capital investment goals, and only one-quarter met their job creation goals

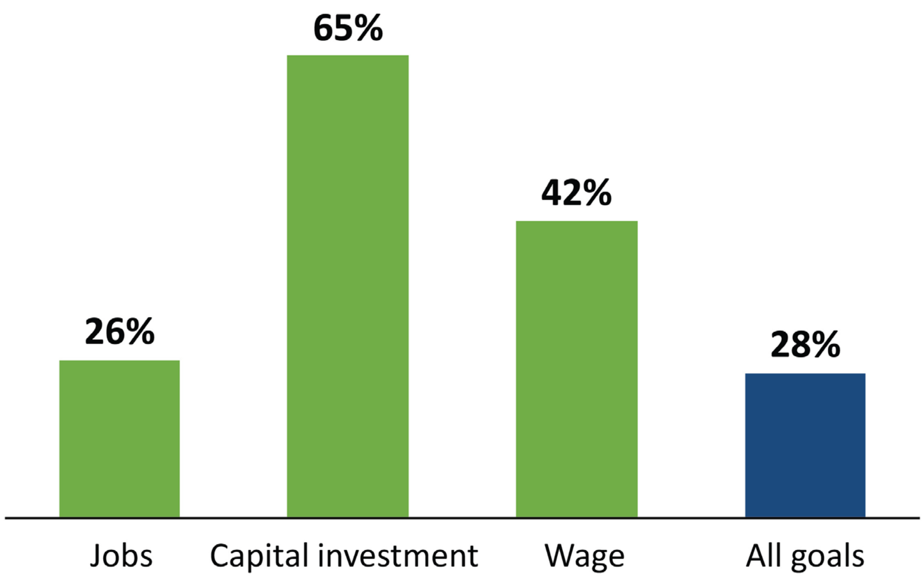
Some grant programs establish an "upfront" award agreement with project-specific goals. The most common project-specific goals are job creation, capital investment, and average wages paid. Several programs use alternative goals that are more relevant to their program. For example, transportation-related programs, such as the Rail Industrial Access Program and Port of Virginia Economic and Infrastructure Grant, establish project-specific goals for rail car volume and Virginia port usage, respectively. (See Appendix H for goals across programs.)

Sixty-five percent of completed projects met or exceeded their project-specific goals for capital investment or other spending (Figure 8). Forty-two percent met their average wage goals, and 26 percent met their job creation goals.

Completed projects include those whose grant performance period ended during the time period analyzed, including projects that did not perform. Not all projects that received a grant award between FY12 and FY21 had completed their performance at the end of FY21. Completed projects represent 3,695 projects and $475 million in awards.

It is likely that the majority of the jobs and business investment or spending by completed projects would have occurred without incentives. Trying to determine the effect of incentives with precision is difficult because site selection decisions are based on a variety of factors. The success in swaying business decisions varies by program. Research on incentives nationally suggests that between 75 percent and 98 percent of projects would have occurred anyway without incentives (Bartik 2018).

FIGURE 8
Majority of completed projects met their capital investment goals (FY12–FY21)



SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: N=1,497 duplicated projects. Only includes projects from programs that establish project-specific goals. Some programs allow projects to attain 90 percent of specific goal(s) before award reduction or recapture is made. For simplicity of making calculations across programs, projects that exceeded 90 percent (or other established percentage) for a specific goal but did not achieve 100 percent are not included in the figure.

Attainment rates for project-specific goals varied widely by program (Table 6). The Port of Virginia Economic and Infrastructure Development Grant Program is the only program with multiple projects where all projects attained project-specific goals. Goal achievement was especially low for some programs. Only four of the 39 completed Agriculture and Forestry Industries Development Grant projects met all project-specific goals.

TABLE 6
Attainment of project-specific goals varied by program (FY12–FY21)

Program	# of projects	% of projects that achieved goal: Job creation	Capital investment	Average wage	All goals
Advanced Shipbuilding Training Facility Grant	1	100	100	n.a.	100
Port of Virginia Economic and Infrastructure Grant	20	100	n.a.	n.a.	100
Commonwealth Research Commercialization Fund	200	n.a.	n.a.	n.a.	87
Rail Industrial Access Program	21	n.a.	62	n.a.	62
Economic Development Access Program	20	n.a.	55	n.a.	55
Commonwealth's Opportunity Fund	183	35	52	60	30
Virginia Jobs Investment Program (Retraining)	139	n.a.	94	39	31
Virginia Investment Partnership Grant	18	28	33	17	17
Tobacco Region Opportunity Fund	179	31	36	39	16
Agriculture and Forestry Industries Devel. Grant	39	23	23	28	10
Virginia Jobs Investment Program (Job Creation)	560	22	76	38	10
Small Business Jobs Grant Fund Program	105	11	**	51	8
Transportation Partnership Opportunity Fund	11	9	0	n.a.	0
Small Business Investment Grant Fund	1	0	0	**	0
Total	**1,497**	**26**	**65**	**42**	**28**

SOURCE: Weldon Cooper Center analysis of economic development incentive grants.
NOTE: Some programs have other goals, which are reflected in the "All goals" column. Some programs do not collect information on average wage levels upon completion of the project. The goal of the VALET program is to increase international sales, and 72 percent of the participants met or exceeded their goal for increased international sales. Some programs, such as the Commonwealth's Opportunity Fund, allow projects to attain 90 percent of specific goals before award reduction or recapture is made. For simplicity of making calculations across programs, projects that exceeded 90 percent (or other established percentage) for a specific goal but did not achieve 100 percent are not shown. For the Commonwealth's Opportunity Fund, 43 percent of projects met a least 90 percent of their job creation goal, and 57 percent met at least 90 percent of their capital investment goal.
n.a. indicates that job creation or investment is not one of the criteria for receiving the grant.
** indicates that data was not provided for program.

Some grant *programs* were more successful overall in achieving goals for job creation and capital investment, even though some of the *projects* did not achieve their project-specific goals. For example, only 52 percent of completed projects that received a Commonwealth's Opportunity Fund grant fully achieved their capital investment goals (Table 6). However, because some projects far exceeded their capital investment goals, collectively all projects created 87 percent of the total capital investment that was expected (Table 7). The Commonwealth's Opportunity Fund also achieved 74 percent of its job creation and 121 percent of average wage goals collectively. Most grant programs had overall success in achieving average wage goals even if they did not have overall success in achieving other goals.

TABLE 7
Projects for most grant programs collectively met their average wage goals (FY12–FY21)

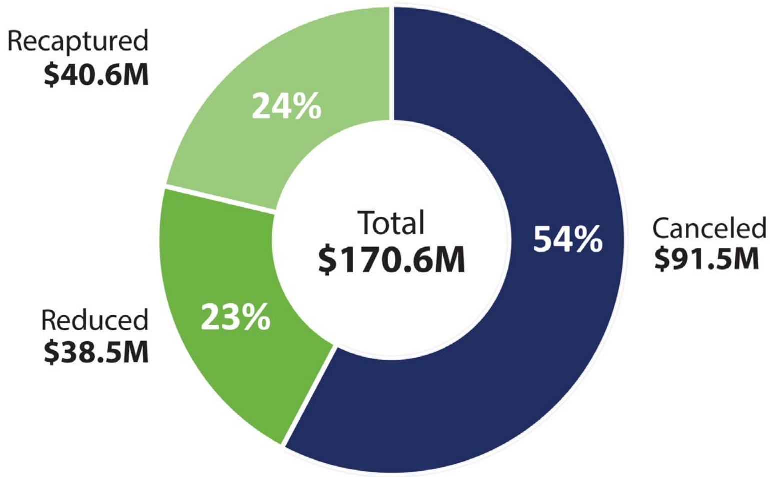
Program	% of collective goals met		
	Job creation goals	Spending or investment goals	Average wage goals
Agriculture and Forestry Industries Devel. Grant	35	78	121%
Commonwealth's Opportunity Fund	74	87	121
Tobacco Region Opportunity Fund	30	42	105
Small Business Jobs Grant Fund Program	36	**	101
Virginia Jobs Investment Program	55	90	96
Virginia Investment Partnership Grant	36	71	77
Advanced Shipbuilding Training Facility Grant	152	119	n.a.
Commonwealth Research Commercialization Fund	n.a.	106	n.a.
Economic Development Access Program	n.a.	95	n.a.
Port of Virginia Economic and Infrastructure Grant	100	n.a.	n.a.
Rail Industrial Access Program	n.a.	101	n.a.
Small Business Investment Grant Fund	0	0	n.a.

SOURCE: Weldon Cooper Center analysis of economic incentive grants.
NOTE: Not all projects collect average wage levels upon completion of the project to calculate the percentage of projects that attained wage goals. The VALET program is excluded from the table because its goal is to increase international sales. Collectively, program participants increased international sales by 109 percent of the expected goal.
n.a. indicates that job creation or investment is not one of the criteria for receiving the grant.
** indicates that data was not provided for program.

Grant awards totaling $171 million were canceled, reduced, or recaptured because projects did not achieve goals

When projects do not go forward or do not meet their goals, the grant awards may be canceled, reduced, or recaptured. Grant awards totaling $171 million (or 10 percent of the total paid or committed between FY12 and FY21) were canceled, reduced, or recaptured because the projects did not go forward or meet their goals (Figure 9). Nearly 54 percent of the $171 million was never paid because projects did not go forward and were canceled. Another 23 percent was not paid to projects for which awards were reduced because the projects did not meet their goals.

FIGURE 9
Grant awards totaling $171 million were canceled, reduced, or recaptured (FY12–FY21)



SOURCE: Weldon Cooper Center analysis of economic development incentive grant awards or award commitments and program information of recaptures, reductions, and cancelations. Numbers may not sum because of rounding.

Approximately $42 million was recaptured between FY12 and FY21 from 163 projects that failed to meet their performance goals. Grant programs that make upfront award payments include recaptures. Each of these programs recaptured small percentages of the funds they awarded:

- Commonwealth's Opportunity Fund: 16 percent;
- Agriculture and Forestry Industries Development grant: 12 percent;
- Tobacco Region Opportunity Fund: 6 percent;
- Small Business Investment Grant: 1 percent
- Economic Development Access Program: 1 percent; and
- Commonwealth Research Commercialization Fund: 1 percent.

Through tax incentives, businesses saved $2.3 billion FY12–FY21

Virginia's economic development tax incentives, such as exemptions, credits, and single sales apportionment, resulted in $2.3 billion in tax savings to businesses between FY12 and FY21. Most ($1.6 billion or 80 percent) of this amount was from sales and use tax exemptions that provide savings to businesses on their purchases of equipment and supplies that qualify for the exemption. Ten of the 19 sales and use tax exemptions each provided more than $20 million in incentives to businesses between FY12 and FY21 (Table 8). Some of these exemptions are provided to capital-intensive industries, such as data centers and airlines, which make substantial equipment purchases to start or upgrade their operations.

Agencies administering grants reported **recapturing** $40.6 million in grant awards. In some cases, this may be less than the full amount that should have been recaptured according to grant guidelines. The upcoming in-depth reports on these incentives will provide more information about agency efforts to recapture funding when projects do not achieve their goals.

Exemptions to Virginia's **retail sales and use tax** can be claimed by businesses for qualifying purchases.

Virginia's retail sales and use tax rate varies by locality: Williamsburg, James City, and York (7 percent); Northern Virginia, Hampton Roads, and Central Virginia (6 percent); Danville, Charlotte, Gloucester, Halifax, Henry, Northampton, and Patrick (6.3 percent); rest of state (5.3 percent). One percent is retained by the locality where the purchase is made.

The **sales tax** applies to the sale of certain goods and services purchased in the state and is generally collected by the merchant at the point of sale.

The **use tax** is levied on out-of-state purchases that are used in Virginia and is self-assessed and remitted to the state by the consumer.

TABLE 8
Sales and use tax exemptions provided an estimated $1.6 billion in tax savings to businesses (FY12–FY21)

Exemption	Total savings ($M)	Average savings per year ($M)
Data Centers Exemption	$1,014.4	$101.4
Railroad Common Carriers Exemption	205.5	20.6
Airline Common Carriers Exemption	95.1	9.5
Ships and Vessels Exemption	64.6	6.5
Media Provider Equipment Exemption	45.3	4.5
Certain Printed Materials for Out-of-State Distribution Exemption	40.8	4.1
Research & Development Exemption	40.6	4.1
Pollution Control Equipment & Facilities Exemption	32.8	3.3
Railroad Rolling Stock Exemption	22.7	2.3
Film, Television, & Audio Production Inputs Exemption	20.0	2.0
Aircraft Parts, Engines, and Supplies Exemption	16.7	1.7
Uniform Rental & Laundry Businesses Exemption	8.4	0.8
Semiconductor Manufacturers Exemption	7.7	0.8
Virginia Spaceport Users Exemption	6.8	0.7
Out-of-state Nuclear Facility Repair Exemption	5.5	0.5
Taxi Parts & Radios Exemption	3.3	0.3
Semiconductor Wafers Exemption	1.2	0.1
Contractor Temporary Storage Exemption	1.1	0.1
Electrostatic Duplicators Exemption	0.1	0.0
Total	**$1,632.7**	**$163.3**

SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Exempted amounts are estimates and exclude the 1 percent sales tax for localities and, in most cases, the additional amounts collected in localities with higher rates, such as Northern Virginia and the Historic Triangle. (See Appendix B for methodology used to estimate the sales and use tax exemptions.)

Tax credits allow businesses or their owners to reduce their income tax liability, dollar for dollar, according to the amount allowed under the credit.

Economic development tax credits provided $487 million in savings to businesses between FY12 and FY21 (Table 9), accounting for about 23 percent of spending on tax incentives. Two coal tax credits account for 57 percent of total economic development tax credits. The largest credit—the Coalfield Employment Enhancement Tax Credit—was available to coal mining companies to help slow the decline of coal mining activity in Virginia. These credits will account for lower amounts of business tax savings in future years because both credits expired effective January 1, 2022. Five other credits awarded more than $20 million in credits during this period. While many of the older tax credits are designed to encourage businesses such as manufacturers to locate or expand in Virginia, the credits adopted more recently are designed to incentivize businesses in other industries (film, wineries, and transportation or distribution companies).

TABLE 9
Tax credits provided nearly $487 million in tax savings to businesses (FY12–FY21)

Tax credit	Total savings ($M)
Coalfield Employment Enhancement Tax Credit	187.5
Virginia Coal Production and Employment Incentive Tax Credit	91.1
Motion Picture Production Tax Credit	41.3
Major Research and Development Tax Credit	40.1
Research and Development Expenses Tax Credit	34.1
Major Business Facility Job Tax Credit	31.7
Qualified Equity and Subordinated Debt Investment Tax Credit	27.0
Recyclable Materials Processing Equipment Tax Credit	16.3
Virginia Port Volume Increase Tax Credit	11.2
International Trade Facility Tax Credit	2.4
Worker Retraining Tax Credit	1.7
Farm Wineries and Vineyards Tax Credit	1.4
Barge and Rail Usage Tax Credit	0.6
Telework Expenses Tax Credit	0.4
Green Job Creation Tax Credit	0.2
Biodiesel and Green Diesel Fuels Producers Tax Credit	0.0
Total, all tax credits	**$486.93M**

SOURCE: Weldon Cooper Center analysis of tax credit information from Virginia Tax.
NOTE: The average tax credit award per year is not reported for tax credits because several new programs were adopted during this time period, and several other programs provided too few awards for disclosure purposes. The Telework Expenses Tax Credit expired January 1, 2019.

Information on **job creation, spending, and other business requirements** in return for receiving tax incentives is not readily available as it is for grants.

Tax incentives' performance will be included in upcoming reports detailing the findings of in-depth evaluations of individual incentives. As part of this effort, JLARC staff will collect performance data—which is either not currently collected or not readily available—on tax incentives.

Since 2014, Virginia has allowed manufacturers to use single sales apportionment—a method that could reduce their income tax liability—to help stem the decline of manufacturing jobs in the state. Tax savings for manufacturers using single sales apportionment is estimated to be $164 million between FY14 and FY21, or about $20 million per year. Since 2017, Virginia has allowed data centers meeting certain eligibility requirements to also use single sales apportionment. Tax savings for data centers using single sales apportionment are estimated to be $0.1 million in FY21.

Apportionment formulas are used to ensure that states do not tax more than their fair share of income from multistate companies. Virginia's standard formula uses three factors (property, payroll, and sales) and double-weights the sales factor.

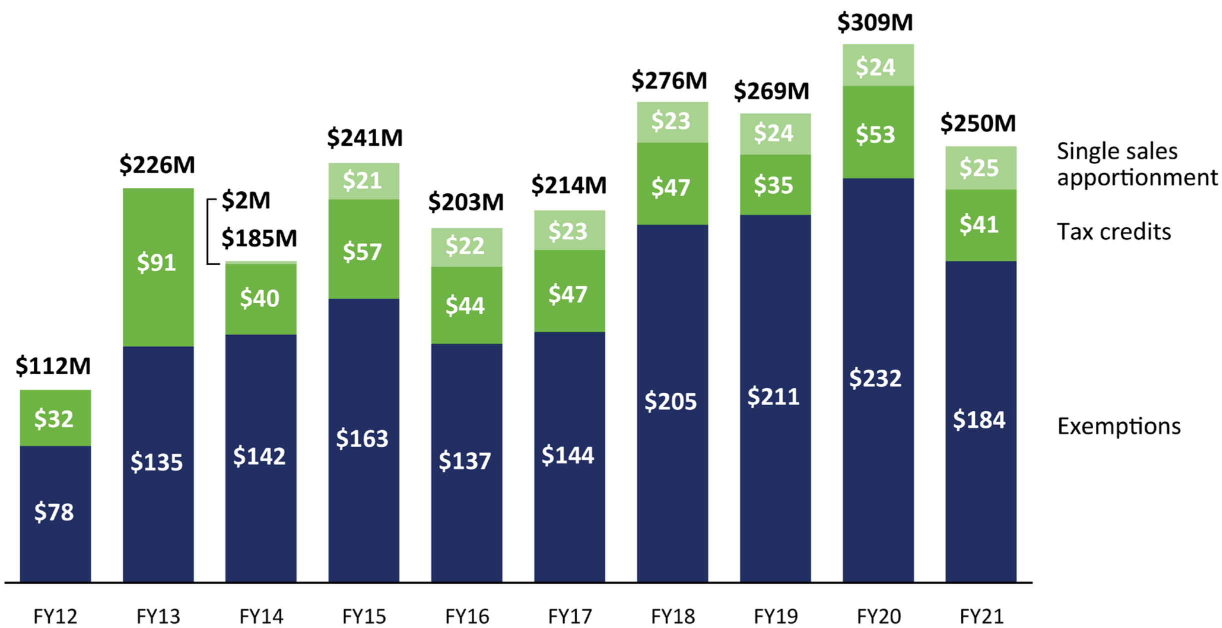
Manufacturers and data centers can use **single sales apportionment** to calculate their taxable income in Virginia based solely on their proportion of total sales that are in Virginia.

Business savings from tax incentives more than doubled FY12–FY21

Annual tax savings realized by businesses from economic development tax exemptions and credits more than doubled between FY12 and FY21 (Figure 10). This occurred for several reasons. The Data Center Exemption became effective in FY10; since FY18, its annual tax savings to businesses are estimated to have exceeded $100 million. The Major Research and Development Tax Credit was established in 2018 and offered tax savings of $17 million in FY20 and $12 million in FY21. Manufacturers single sales apportionment became effective in FY15; by FY21 its annual tax savings to businesses are estimated to be $25 million.

Gradual improvements in the economy between FY10 and FY20 also led to a recovery in business spending and investment. This recovery magnified the fiscal impact of sales and use tax exemptions that target capital-intensive industries, such as rail, air, and water transportation companies. Likewise, the impact of the COVID-19 pandemic on businesses and the economy is one possible reason why tax savings to businesses declined in FY21.

FIGURE 10
Business savings from tax incentives increased (FY12–FY21)



SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: Exempted amounts are estimates and exclude the 1 percent sales tax for localities and the additional amounts collected in some localities, such as Northern Virginia and the Historic Triangle. Not adjusted for inflation. The trend is nearly identical if adjusted for inflation.

Businesses obtained $52 million in loans and gap funding through financing programs FY12–FY21

Virginia offers six incentive programs that are designed to assist firms in securing additional debt and equity financing. The Virginia Small Business Financing Authority (VSBFA) administers four of these programs, which provide loan assistance to eligible businesses:

- Economic Development Loan Fund provides loan financing for eligible small businesses that create permanent full-time jobs;
- Loan Guaranty Program helps small businesses obtain loans by reducing bank credit risk;
- State Cash Collateral Program assists small businesses that lack the necessary collateral to obtain a loan, and

- SWaM Loan Fund provides small loans to small businesses to use for working capital, financing accounts receivable and inventory, and other short-term financing needs.

Virginia also offers two gap financing programs. The Virginia Innovation Partnership Corporation, formerly the Center for Innovative Technology, offers gap funding through its Growth Acceleration Program (GAP) Fund, which enables technology firms with high growth potential to obtain additional venture capital investment. The Virginia Tourism Corporation administers the Tourism Development Financing Program to large-scale tourism projects.

Venture capital is financing that investors provide to startup companies and small businesses that are believed to have long-term growth potential.

These financing programs incentivize different types of business activity than the state's grant programs. Over 76 percent of VSBFA assistance was provided to small businesses in services and trade industries between FY12 and FY21. Seventy-five percent of GAP Fund recipients were in professional, scientific, and technical services and information industries, which include businesses in high-tech fields such as biotechnology and software development. In contrast, 76 percent of grant funding was for corporate headquarters and manufacturers.

Awards from financing programs have typically been more concentrated in metropolitan areas of the state than grant programs, although more recently grant programs have also been more concentrated in urban localities. Eighty-three percent of VSBFA loan and 99 percent of GAP Fund awards went to projects in metropolitan areas between FY12 and FY21. Nearly two-thirds of GAP Fund assistance went to firms in Northern Virginia, with 42 percent to Fairfax County companies alone. A large portion of the remaining award amounts were made to firms in localities that are home to the state's major research universities. In contrast, the percentage of grant funding that went to projects in metropolitan areas has historically been lower (around 65 percent), but increased to 82 percent in FY21, because three companies that received custom grants in FY19 are all located in Northern Virginia.

VSBFA programs helped businesses obtain more than $28 million in loans and loan enhancements

Loan enhancements include collateral or guaranty assistance provided to a commercial bank to help the business secure a loan.

Small businesses aided by the four VSBFA programs obtained $28 million in loan and loan enhancement financing between FY12 and FY21 (Table 10). In most cases, state appropriations were not directly used to finance the loans or provide the obligation to secure the loans. While programs may have received appropriations in the past, the programs use revolving loan funds, which means they utilize interest and principal payments on old loans to issue new ones, or receive funding from other self-financing programs offered by VSBFA.

The average loan or loan enhancement was $92,670, but the average varied among the four programs. The Economic Development Loan Fund provided the greatest amount of average loan assistance at $594,624 per project. The SWaM Loan Fund provided the least, at $20,221 per project.

TABLE 10
VSBFA programs helped businesses secure nearly $28 million in loans or equity financing (FY12–FY21)

Program	Amount awarded	# of projects	Average award	# of jobs	Loan/loan enhancement per job
Economic Development Loan Fund	$2,973,118	5	$594,624	39	$76,234
Loan Guaranty Program	19,082,738	84	227,175	564	33,835
State Cash Collateral Program	1,930,000	8	241,250	56	34,464
SWaM Loan Fund	4,185,682	207	20,221	558	7,501
Total	**$28,171,538**	**304**	**$92,670**	**1,217**	**$23,148**

SOURCE: Weldon Cooper Center analysis of economic development incentives.
NOTE: VSBFA programs use only a small portion of state funding to secure loan financing. Jobs reported are expected jobs.

The four programs collectively were expected to add 1,217 jobs. The average loan or loan enhancement assistance per job was $23,148. This figure is not directly comparable to the average grant award per job ($6,832), because state funding for these programs represents only a small portion of the total loan and loan enhancement amount. For example, the Loan Guaranty Program provides the financial guarantee to secure a loan provided by a private bank on behalf of an eligible business. The program would be required to obligate funds only if an eligible business were to default on its loan. The SWaM loan is a direct loan provided by VSBFA, but funding for the loan is derived from fees from other bond financing provided by VSBFA and not state appropriations.

GAP Fund program provided businesses a total of $24 million in financing

Recipients of GAP Fund financing received $24.3 million between FY12 and FY21 to attract venture capital investment. This program made awards to 335 projects, for an average award of $72,612. Program investments were $3.3 million in FY20 and FY21, which were the highest award amount since $3.5 million in FY14. Most (103) of the 118 completed projects in the GAP Funds program met their financing objectives for the period, according to the Virginia Innovation Partnership Corporation.

Tourism Development Financing Program provided tourism projects $13 million in financing

The Tourism Development Financing Program was created in 2011 and provides gap financing for tourism development projects otherwise unable to access capital. The program allows eligible projects to keep a portion of state sales and use taxes that are generated by the project. Eight projects have received $13.4 million in state funding through FY21. Projects that are receiving financing from the project include The Main Hilton Hotel in Norfolk and the historic Hotel Weyanoke in Farmville.

Grants have higher economic benefits than tax incentives

Virginia's economic development incentives are estimated to generate additional economic activity for the state. Economic impact analysis estimates that private sector employment increased by about 13,300 jobs per year, Virginia GDP increased by $2.7 billion per year, and statewide personal income increased by $1.3 billion per year, on average, because of all incentives between FY12 and FY21 (Table 11). For every $1 million in spending on all incentives, it is estimated that an additional 56 jobs, $11 million in Virginia GDP, and $5 million in personal income per year, on average, are added to the Virginia economy. These estimates assume that only a portion of the economic activity can be attributed to incentives. Research on incentives nationally suggests that between 75 percent and 98 percent of projects would have occurred anyway without incentives (Bartik 2018). (See Appendix I for more information about the assumptions used by type of incentive.)

Economic impact analysis of incentive spending between FY12 and FY21 was conducted using economic modeling software developed by REMI, Inc.

(See Appendix I for the economic impact analysis used in this study.)

The additional economic activity generated varies by incentive type. Sales and use tax exemptions are estimated to account for more than half of the net additional jobs, Virginia GDP, and personal income because of incentives (Table 11). The majority of this additional activity is because of the Data Center Exemption, which is by far Virginia's largest incentive. Tax credits, in contrast, are estimated to generate a small portion of additional jobs and personal income and are estimated to generate a net loss in Virginia GDP. This loss occurs because the reduction in Virginia GDP that results from increasing taxes to pay for the credits, particularly the Coalfield Employment Enhancement Tax Credit, is greater than the total additional GDP generated.

Grants have higher economic benefits than tax incentives when benefits are assessed per $1 million spent (Table 11). For every $1 million spent on grants between FY12 and FY21, it is estimated that an additional 113 jobs, $22 million in Virginia GDP, and $11 million in personal income are added to the Virginia economy. Tax credits generate the lowest amounts of economic benefits, generating less than $1 million in Virginia GDP and approximately $1 million in personal income per every $1 million in spending.

Net impact is the increase in economic activity induced by the incentives after adjusting for the opportunity cost of increasing taxes to pay for the incentives.

(See Appendix I for more information.)

TABLE 11
Virginia's economic development incentives are estimated to generate additional economic activity for the state (FY12–FY21)

	Annual average (FY12-FY21)				
	Grants	**Tax credits**	**Tax exemptions**	**Other incentives**	**All incentives**
Net impact to Virginia economy					
Private employment	4,591 jobs	87 jobs	8,561 jobs	90 jobs	13,329 jobs
Virginia GDP	$898.8 M	−$15.7 M	$1,787.5 M	$11.9 M	$2,682.5 M
Personal income	$452.3 M	$4.4 M	$797.7 M	$8.2 M	$1,262.6 M
Impact to Virginia economy per $1 million of spending					
Private employment	113 jobs	9 jobs	60 jobs	13 jobs	56 jobs
Virginia GDP	$21.7 M	$0.7 M	$12.0 M	$1.8 M	$10.9 M
Personal income	$11.2 M	$0.9 M	$5.7 M	$1.2 M	$5.4 M
Impact to state revenue					
Total revenue	$37.6 M	$2.4 M	$60.3 M	$0.9 M	$101.0 M
Cost of incentive	$43.4 M	$48.7 M	$163.3 M	$18.0 M	$273.4 M
Net revenue	−$5.8 M	−$46.3 M	−$102.9 M	−$17.0 M	−$172.2M
Return in revenue for every $1 spent	87¢	5¢	37¢	5¢	37¢

SOURCE: Weldon Cooper Center economic impact analysis of business activity induced by Virginia's economic development incentive programs between FY12 and FY21.
NOTE: Includes direct, indirect, and induced impacts of completed projects only. Assumes that only a portion of employment creation, capital investment, sales, or other activity is attributable to the programs. 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. Estimates of the grants' economic benefits are adjusted to account for projects that receive grants from more than one program as indicated in Table 5. Some additional duplication may still exist for projects that receive a grant and a tax credit, for example, but it is expected to be slight. (See Appendix I for more information about the economic impact estimates and the detailed results on total impact of the incentives, impact of raising income taxes by the amount of the incentives [opportunity cost], and revenue generated by source.) "Other incentives" includes loan, gap financing, manufacturers' single sales factor apportionment, and income tax subtractions. Estimated impacts per $1 million in spending and estimated return in revenue per $1 spent for "other incentives" is low even though, as noted in prior reports, the estimated benefits and returns in revenue for Virginia's loan programs are high. This is because of a change in methodology for estimating the economic impacts for single sales manufacturing, for which spending is substantially higher and estimated economic impacts are low.

The return in revenue to the state for every $1 spent on incentives also varies widely by type of incentive (Table 11), with grants generating higher returns in revenue than tax incentives. For every $1 spent on grants between FY12 and FY21, it is estimated that the state receives 87¢ in revenue in return.

Grant programs have higher economic benefits and returns in state revenue than tax incentives for several reasons. Economic benefits per $1 million spent and returns in revenue are higher when awards are made to projects in export-base industries that have high economic multipliers and pay above average employee compensation. Thirty-four percent of grant funding was directed to businesses in manufacturing industries, which are export-base, generally have high economic multipliers, and pay higher wages. In contrast, only 7 percent of sales and use tax expenditures, 17 percent of loan and gap financing, and 8 percent of tax credit expenditures are directed to manufacturing businesses.

Businesses that receive grants must also agree to create jobs and make capital investments, usually above minimum levels. Economic benefits and returns in revenue are higher for programs targeted to businesses that commit to creating jobs and making capital investments. In contrast to grants, other incentives often do not have similar job creation and capital investment requirements for business recipients. The Data Center Exemption is one exception.

Estimates of grant programs' economic benefits and returns in revenue are also more precise and less likely to be underestimated than other programs. More precise estimates of the economic benefit can be generated for grant programs because employment and capital expenditure performance data is readily available. Employment and capital expenditure impacts of businesses that received tax credits and most sales and use tax exemptions (with exception of the Data Center Exemption) must be inferred from model simulations and may be slightly underestimated. These simulations produce relatively conservative estimates of program employment and output impacts and could result in slightly more conservative estimates of the economic benefits of these programs.

Appendix A: Study mandate

2022–2024 Appropriation Act
Passed as Chapter 2 of the Acts Assembly, June 22, 2022

§ 1-11 Item 36 E

F.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

- data collection and analysis,
- estimation of sales and use tax exemptions,
- economic impact analysis (see Appendix I for more information),
- agency staff interviews, and
- review of documents and research.

Data collection and analysis

Weldon Cooper Center collected project data from 12 state agencies that administer Virginia economic development incentive programs. Data was provided for grant, tax credit, and loan or gap financing programs that have made awards. Among the data elements collected for the incentive programs were business identifiers, location, industry type, amount of grant approved and paid, and program performance metrics, such as number of jobs created, average wage levels, and capital investment (Table B-1). Some programs, namely the small business loan and tax incentive programs, do not collect performance data or maintain it electronically.

TABLE B-1
Data and information were collected from 13 state agencies on incentive awards

Agencies	Types of information
Dept. of Housing and Community Development	Business identifiers (name, federal tax ID number)
Department of Rail and Public Transportation	Industry
Tobacco Region Revitalization Commission	Location (locality) of project
Virginia Department of Agriculture and Consumer Services	Amount of incentive approved and paid
Virginia Department of Taxation	Number of jobs promised and created and timing
Virginia Department of Transportation	Capital investment promised and delivered and timing
Virginia Economic Development Partnership	Average wages promised and delivered and timing
Virginia Film Office	Other performance metrics as specified
Virginia Innovation Partnership Corporation	
Virginia Port Authority	
Virginia Small Business Financing Authority	
Virginia Tourism Corporation	

SOURCE: Weldon Cooper Center.

Analysis of grant programs

For discretionary and by-right grant programs, program spending by fiscal year was computed as the funds paid for completed projects and grant funds still committed toward active but unfinished projects. For most grant programs, spending was assigned to the same date/year when awards were approved. The approval date represents when a contract between the agency and the business is signed in either a memorandum of understanding or performance agreement. Many programs make award payments upon approval or soon after. Because custom grants are often large awards with long performance periods, spending is assigned to the fiscal year in which payments are made. Program expenditures by fiscal year were computed as the funds paid for completed projects and grant funds still committed toward active but unfinished projects.

For the grant award analysis, awards for all grant awards and amounts were assigned to the year in which the award was approved. Grant program awards and amounts were also categorized by location and industry using North American Industrial Classification System (NAICS) codes provided by the agency administering the grant or from information available from the Virginia Employment Commission (VEC) or other sources. Several agencies did not provide NAICS codes for each project.

For many grant projects, project awards were matched with VEC unit-level Quarterly Census of Employment and Wages (QCEW) records obtained under a confidentiality agreement with VEC. These grant records were matched with QCEW records using firm name, address, and when available, taxpayer identification numbers. In some instances, matches could not be found. In these cases, additional online research using Manta.com, other business directories, and company websites was conducted to characterize the primary industry of the establishment and/or firm primary. When information was not available, certain assumptions about the nature of the firm or prospective firm were made. For Enterprise Zone Real Property Investment Grant projects that could not be otherwise identified (generally Limited Liability Corporation beneficiaries set up for commercial real estate development purposes), a NAICS code of "531120" ("Real Estate and Rental and Leasing") was assigned. Governor's Motion Picture Opportunity Fund projects were characterized as NAICS 512110 ("Motion Picture and Video Production"). Speculative infrastructure projects funded by the Tobacco Commission Megasite Program, Virginia Business Ready Sites Program, and Economic Development Access Program were assumed to be NAICS 333000 ("Machinery Manufacturing").

Seventeen Governor's Motion Picture Opportunity Fund awards for a total award amount of $11.85 million were also not assigned to localities. The filming activities for these projects occurred in multiple locations throughout the state but principally in Central Virginia.

Grant project records do not systematically include the employment of businesses receiving awards across programs. Estimation of the employment size of the business that received the grant was conducted by matching grant records with VEC QCEW payroll employment records that corresponded to the year of the award. Many companies have more than one location in Virginia, and only the employment levels for the specific location of the business that qualified for the grant were included in the analysis. Project records for FY12 through FY21 were matched by fiscal year of award with the corresponding VEC employment data by calendar year between 2011 and 2020 (i.e., FY21 project records were matched to calendar year 2020 VEC employment records). Using this process, 60 percent of the total number of awards and 70 percent of the award amounts were accounted for.

Project awards were weighted to account for the underrepresentation of smaller awards (and correspondingly small establishments) relative to their occurrence in the grant files to improve the representation of smaller establishments in the tabulations.

Analysis of loan programs

For the four loan programs administered by the Virginia Small Business Financing Authority—the Economic Development Loan Fund, Loan Guaranty Program, State Cash Collateral Program, and SWaM Loan Fund—there were no state appropriations for the programs for the FY12–FY21 period. These programs are primarily revolving loan funds or secure funding outside the legislative appropriation process, but some have received state appropriations in the past. Since some programs have relied or continue to rely on federal funding, only those projects that could be attributed to previous state funding were included in this analysis. The costs of the programs were estimated to be the actual or projected defaults. The average default rate (1.7 percent) for these loans was also applied to awarded loans to estimate the "cost" of the loan portion of Tobacco Region Opportunity Fund (TROF) awards. In the last four years, the Tobacco Region Revitalization Commission has begun to issue a larger portion of its TROF awards in the form of revolving loans.

Analysis of GAP Funds

The GAP Funds program, administered by the Virginia Innovation Partnership Corporation, generates a return on its investments in early-stage firms. Gross realized returns derive from merger and acquisition activity, to include escrows, dividends, and milestone payments, along with secondary sale of assets (GAP Funds' equity positions) and convertible note repayments. For the period FY11–FY20, the funds recouped nearly $20 million in gross returns for $32.3 million in state appropriations during the period (62%). Thus, for the purposes of estimating program expenditures in this report, it is assumed that only 38% of total completed project investment relied on new state appropriations over the period and represented new state spending on the program.

Analysis of tax credits

For quantifying the revenue impact of state economic development-related tax credits, Weldon Cooper Center used corporate and individual tax credit files obtained from the Virginia Department of Taxation (Virginia Tax). These files list tax credit redemptions by fiscal year of utilization based on when the return was processed. (See the Virginia Tax annual report, Table 3.1: Fiscal Year Tax Credits.)

Incentives excluded from the analysis and report

Several programs did not make awards during the period of analysis (FY12–FY21) and are not included in this report. Information for one new program was not provided until after the writing of this report and is not included. The New Company Incentive Program provided access to a Commonwealth's Opportunity Fund grant of $626,500 for one project in FY21. The project is not using the modified method of income tax apportionment to-date.

Three grant programs have been active for over a decade but have not yet funded private business projects:

- Tobacco Commission Agribusiness Grant Program,

- Tobacco Commission Southside Economic Development Grant Program, and
- Tobacco Commission Southwest Economic Development Grant Program.

Two programs covered in the previous FY21 report are discontinued because they are no longer active. They include:

- Pulp, Paper, and Fertilizer Advanced Manufacturing Grant Program and
- Semiconductor Grant Program (Qimonda).

Three grant programs made awards that occurred earlier than FY10, and these incentives are not included in the sections pertaining to awards and performance. They are included in the spending analysis since grant payments were issued between FY12 and FY21. These grants include:

- Aerospace Engine Manufacturing Performance Grant Program (Rolls-Royce),
- Semiconductor Grant Program (Micron), and
- SRI custom grant.

The award analysis does not include these three custom grants, but the spending analysis includes payments made to Rolls-Royce, Micron, and SRI.

This report includes program expenditures for several economic development incentive programs that were not included in the 2021 report. Three of these programs are new grant programs: Governor's New Airline Service Incentive Fund, Technology Development Grant Fund (Microsoft), and Truck Manufacturing Grant Fund (Volvo). The Worker Training Tax Credit, which replaced the Worker Retraining Tax Credit, became effective January 1, 2019 and was claimed beginning in FY21. As part of the recent Science and Technology Incentives report, estimates were obtained for three programs: Qualified Business Long-Term Capital Gain Subtraction, Venture Capital Account Subtraction, and Zero G Zero Tax Act Subtractions (Parts I and II).

Estimation of business savings from sales and use tax exemptions

Sales and use 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 a sales and use exemption certificate from Virginia Tax (available online) and present it to merchants at the point 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 size of these tax savings to businesses must be estimated by other means. For other exemptions, such as the data center and pollution control equipment exemptions, Virginia Tax issues the exemption certificate after approving an application. The business may not have the certificate at the time of eligible purchases and can apply for a refund once the exemption certificate is obtained.

For quantifying forgone revenue because of sales and use tax exemptions, Weldon Cooper Center relied on Virginia Tax fiscal impact estimates and staff-generated estimates based on IMPLAN and other data sources (Table B-2). Virginia Tax estimates are based on a variety of approaches, including industry surveys, industry association tallies, and imputations made from secondary data sources such as federal statistical data. Some estimates rely on sales and use tax exemption estimates published as part of detailed tax expenditure studies conducted by Virginia Tax in the early- and mid-1990s. More recent estimates are sometimes available when Virginia Tax issues fiscal impact estimates to inform new General Assembly legislation. Weldon Cooper Center estimates were substituted for Virginia Tax estimates in three different situations:

- if the Virginia Tax estimates were based on much older estimates and credible estimates could be generated using more recent data and alternative methods;
- if Virginia Tax estimates were not available for a specific sales and use tax exemption; and
- if an alternative methodology had practical or conceptual advantages over the Virginia Tax estimates.

Weldon Cooper Center estimates for tax revenue rely primarily on IMPLAN data for Virginia. IMPLAN is a commercial economic impact model produced by MIG, Inc. 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 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 construction machinery manufacturing industry spent $0.00170 per dollar of output on commodity railroad rolling stock. This absorption coefficient was multiplied by the output of the construction machinery equipment industry for 2015 ($122,220,940) to obtain the estimated expenditure on this input ($208,000).

Because the exemptions are sometimes more narrowly targeted than the individual IMPLAN sectors available, supplemental data from Lightcast™ (formerly Economic Modeling Systems, Inc. or EMSI), Virginia Employment Commission, Bureau of Labor Statistics, and Bureau of Transportation Statistics was used to apportion the sector purchases to narrower industry subsets. For example, the airline common carrier exemption is available for air common carriers that provide scheduled service to Virginia airports at least once per week. Eligible purchases were imputed by apportioning IMPLAN input purchase estimates by the percentage of the air transportation industry (NAICS 481) providing scheduled service (NAICS 4811---Scheduled Air Transportation) and apportioning again based on the percentage of scheduled departures performed by airlines that provide service at least once per week based on Bureau of Transportation Statistics T- 100 Air Carrier Traffic Segment data.

TABLE B-2
Estimates of business savings from sales and use tax exemptions were based on different methods and sources

Exemption	Sources used to derive estimate
Airline Common Carriers Exemption	IMPLAN, Bureau of Transportation Statistics (BTS), Lightcast™
Aircraft Parts, Engines, and Supplies Exemption	Federal Aviation Administration aircraft registration data and Conklin& de Decker Aircraft Cost Evaluation V18.20
Certain Printed Materials for Out-of-State Distribution Exemption	Virginia Tax (Sales and use tax study 1991)
Contractor Temporary Storage Exemption	Virginia Tax (Sales and use tax study 1995)
Data Centers Exemption	Weldon Cooper Center based on VEDP MOU data
Electrostatic Duplicators Exemption	IMPLAN, Lightcast™
Film, Television, & Audio Production Inputs Exemption	IMPLAN, Lightcast™
Media Provider Equipment Exemption	Virginia Tax estimate (updated) for legislative proposal
Out-of-State Nuclear Facility Repair Exemption	IMPLAN, VEC, Lightcast™
Pollution Control Equipment & Facilities Exemption	Weldon Cooper Center survey of Virginia Tax form ST-11A users
Railroad Common Carriers Exemption	IMPLAN
Railroad Rolling Stock Exemption	RailInc, Lightcast™, U.S. Census Commodity Flow data
Research & Development Exemption	NSF Business R&D and Innovation Survey
Semiconductor Manufacturers Exemption	IMPLAN, industry use estimate
Semiconductor Wafers Exemption	IMPLAN, industry use estimate
Ships and Vessels Exemption	Weldon Cooper Center survey of ship repair and dredging firms, VEC
Taxi Parts & Radios Exemption	Virginia Tax fiscal impact, HB1488 (2004)
Uniform Rental & Laundry Businesses Exemption	IMPLAN, Lightcast™
Virginia Spaceport Users Exemption	Number of Mid-Atlantic Regional Spaceport launches and revenue per launch from Federal Aviation Administration

SOURCE: Weldon Cooper Center.
NOTE: The Data Center Exemption estimate methodology used for this report is different than the methodology used by Virginia Tax, and therefore the estimates differ. See Appendix B of Data Center and Manufacturing Incentives, JLARC, 2019 for the assumptions made by the Weldon Cooper Center for the estimates used in these incentive evaluation reports.

The sectors targeted vary by sales and use tax exemption, as do the categories of purchases that are eligible for exemption. Generally speaking, tangible personal property purchases and leases are covered though the specific items sometimes differ. For instance, the railroad rolling stock exemption gives Virginia manufacturing firms an exemption on purchases of rolling stock. The tax base is determined by aggregating purchases of rolling stock across all Virginia manufacturing industries.

Other adjustments are needed to convert calendar years to fiscal years. IMPLAN purchases are expressed in terms of calendar years; thus fiscal year estimates were calculated by averaging two calendar years (e.g., FY15 is the average of CY14 and CY15). The last calendar year of data available from IMPLAN is 2020. Therefore, FY21 revenue estimates were calculated by inflating the FY20 estimates by the consumer price index (CPI).

Agency interviews

In 2017, Weldon Cooper Center and JLARC staff conducted structured interviews with state agency staff that administered and/or provided research support for economic development incentive programs. The interviewees included representatives of each of the 13 agencies that administer grants, loans, and gap financing and several staff from Virginia Tax. Topics included the purpose of each program, criteria used in selecting award recipients and amounts, and data availability and quality for tracking program performance. Additional interviews are only performed as needed, such as when new incentive programs are adopted, programs are substantially changed, or programs are selected as part of an intensive review for that year.

Review of documents and research

Weldon Cooper Center reviewed several sources of information, including documents, reports, and published or unpublished research. The purpose of this literature review was to understand the purpose and goals of Virginia economic development incentive programs, determine the best approach to quantify the revenue impacts of sales and use tax exemptions, and develop an approach for performance evaluation that draws on best practices from other states. Sources consulted included

- Virginia agency documents that describe economic development incentive program purpose, application requirements, award criteria, and other features;
- Virginia Legislative Information System documents describing grant and sales and use exemption statutes and Virginia Tax fiscal impact estimates; and
- state economic development performance evaluations published by state agencies or their consultants in Virginia and other states.

Appendix C: 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 Tax, secretary of commerce and trade, and secretary of finance.

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

VEDP | Virginia Economic Development Partnership

December 2, 2022

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, *Economic Development Incentives 2022: Spending and Performance*

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, Economic Development Incentives 2022: Spending and Performance.

The report provides a helpful overview of economic development incentive spending and performance in the Commonwealth. Among other things, we appreciate your analysis showing that projects that received grant awards between FY12 and FY21 and completed their location or expansion project collectively created an estimated 70,000 jobs and $17.1 billion in capital investment and other spending in Virginia.

Your report demonstrates the impact of some of VEDP's most important economic development incentive programs. Notably, completed projects that received Virginia Jobs Investment Program (VJIP) grants accounted for the largest share of jobs (44,351) and capital investment and other spending ($7.4 billion) associated with Virginia's economic development grant programs during this time period. Similarly, projects funded through the Commonwealth's Opportunity Fund (COF) ranked second in job creation (19,588 jobs) and business spending ($6.6 billion). In addition, 65 percent of completed projects met or exceeded their project-specific goals for capital investment or other spending.

We understand that the goal of the report is to review and evaluate the effectiveness of economic development initiatives, and we appreciate the level of analysis that goes into this report each year. However, as noted in response to previous reports, the sidebar on page 16 makes a generalization about the effectiveness of economic development incentive programs that is not based on this analysis. In practice, the effectiveness of economic development incentives in influencing company location decisions varies by program design and the amount of incentives offered relative to job creation and investment, among other factors.

Regarding the data center sales and use tax exemption, we would like to highlight that, as noted in your 2019 report, available information is insufficient to accurately estimate the full fiscal impact and the economic benefits of this exemption. The General Assembly amended § 58.1-609.3 of the Code of Virginia in 2021 to enhance reporting requirements and require VEDP and the Virginia Department of Taxation to report on a biennial basis. VEDP believes

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

that the economic impact of this exemption is understated due to incomplete information in the past. With the information available through new reporting requirements going forward, we hope the full impact of this critical incentive program can be shown.

Finally, when referring to fiscal impacts of tax exemptions, the report includes the word “spending,” which could potentially be misleading. It may be helpful to refer to revenue losses attributable to provisions of tax code as “tax expenditure” rather than "spending."

As usual, we appreciated the professionalism of JLARC staff during the project, and compliment your team on its insightful analysis and reporting.

Sincerely,

Jason El Koubi
President & CEO

COMMONWEALTH of VIRGINIA

Department of Taxation

December 2, 2022

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

Dear ~~Mr. Greer~~ Hal:

Thank you for the opportunity to review and comment on the exposure draft report: *Economic Development Incentives, 2022.* We believe the report is very well done and will be useful to the members of the General Assembly going forward. We also appreciate you incorporating our comments and suggestions into the final report.

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

Sincerely,

Craig M. Burns
Tax Commissioner

c: The Honorable Stephen E. Cummings, Secretary of Finance

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