Registered Apprenticeship in Virginia

Experiences with Quality and Growth from 2017 to 2024

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Virginia governor-elect Abigail Spanberger and her incoming administration consider registered apprenticeship a key component of their strategy to grow Virginia's workforce. Registered apprenticeship is an occupational skills training model that combines paid on-the-job learning with related technical instruction to prepare apprentices for productive careers. The Spanberger campaign's Growing Virginia Plan identifies strong pathways from middle and high school into apprenticeship, as well as apprenticeships that provide access to "family-sustaining careers" as the new administration's key goals for strengthening registered apprenticeship in the state (Spanberger for Governor 2025).

This brief describes Virginia's experience with registered apprenticeship from 2017 to 2024 using data from the Registered Apprenticeship Partners Information Data System (RAPIDS). It reports trends in the number of active apprentices and programs. The analysis suggests that the incoming administration has a strong foundation to build on. Between 2017 and 2024, Virginia experienced steady growth in the number of new and active apprentices, and the percentage of apprentices earning a living wage at the start of their apprenticeship has grown since 2019. The number of active apprenticeship programs has been high and stable. Finally, most new program registrations are for programs outside of construction, though the number of new programs registered each year has declined since 2021.

Apprenticeship Policy in Virginia

Virginia is one of 30 states (including the District of Columbia) with a State Apprenticeship Agency (SAA) that exercises the authority to register new apprenticeship programs. The federal Office of Apprenticeship (OA) registers programs in all other states. In some SAA states, an apprenticeship council has the authority to approve new apprenticeship programs, while in other states, the SAA itself has this authority. Virginia is the latter type. New apprenticeship programs are approved by the SAA,

while the Virginia Apprenticeship Council sets standards for apprenticeship in the state and advises on policy. Gardiner and Nayak (2024) show that states like Virginia, where an SAA approves new programs, register new programs at a higher rate than states where a council approves new programs.

State governments have an important role in shaping their apprenticeship systems—regardless of whether the state is an SAA state or an OA state—by providing technical assistance to program sponsors and intermediaries and through investments in apprenticeship programs. In 2025, Virginia used its State Apprenticeship Expansion Formula grant and the governor's set-aside Workforce Innovation and Opportunity Act Title I funds (both from the federal government) to finance three incentive programs for apprenticeship sponsors, employers, and career and technical education (CTE) centers:

- **The HIRED Apprenticeship Fund** provides employers up to $4,000 for training and an additional $2,000 in supportive services for registered apprentices. The funding is targeted to apprenticeships in fields outside of construction, where apprenticeship is relatively new.[1]
- **The Apprenticeship Pathways Program for Employers** provides employers up to $40,000 in reimbursements to help expand pre-apprenticeship and youth apprenticeship programs.[2]
- **The Apprenticeship Pathways Program for CTE Centers** supports partnerships between CTE centers and employers to provide apprenticeship training with up to $10,000 to reimburse equipment, tool, and material costs.[3]

Incentives to promote apprenticeship—such as Virginia's HIRED Apprenticeship Fund and the employer and CTE center Apprenticeship Pathways Programs—are used by many states seeking to expand apprenticeship and because apprenticeship receives less federal and state financial support than other types of postsecondary education and training (Spaulding and Petrov 2023; Arabandi and Haisma 2025). Apprenticeship incentives are promising, and there is some evidence that incentives to pay for apprentices' related technical instruction are correlated with more successful recruitment (Gardiner et al. 2021), but there is little rigorous evidence on either the success of these incentive programs at expanding apprenticeship or their cost-effectiveness.

Growth in Virginians Registered as Apprentices

Virginia apprentices can be identified in three ways. In most cases, these three definitions follow each other closely, but in theory, each definition of a Virginia apprentice reflects different policy levers.

1. **Apprentices in programs registered by Virginia**. Since Virginia is an SAA state, it can register new apprenticeship programs. Nationally registered apprenticeship programs can also operate in Virginia, and Virginia residents can be apprentices in neighboring states, but programs registered by the state of Virginia most directly represent state policy and investments.
2. **Apprentices in programs located in Virginia**. RAPIDS identifies the street address of the registered apprenticeship program sponsor, so apprentices can also be identified with

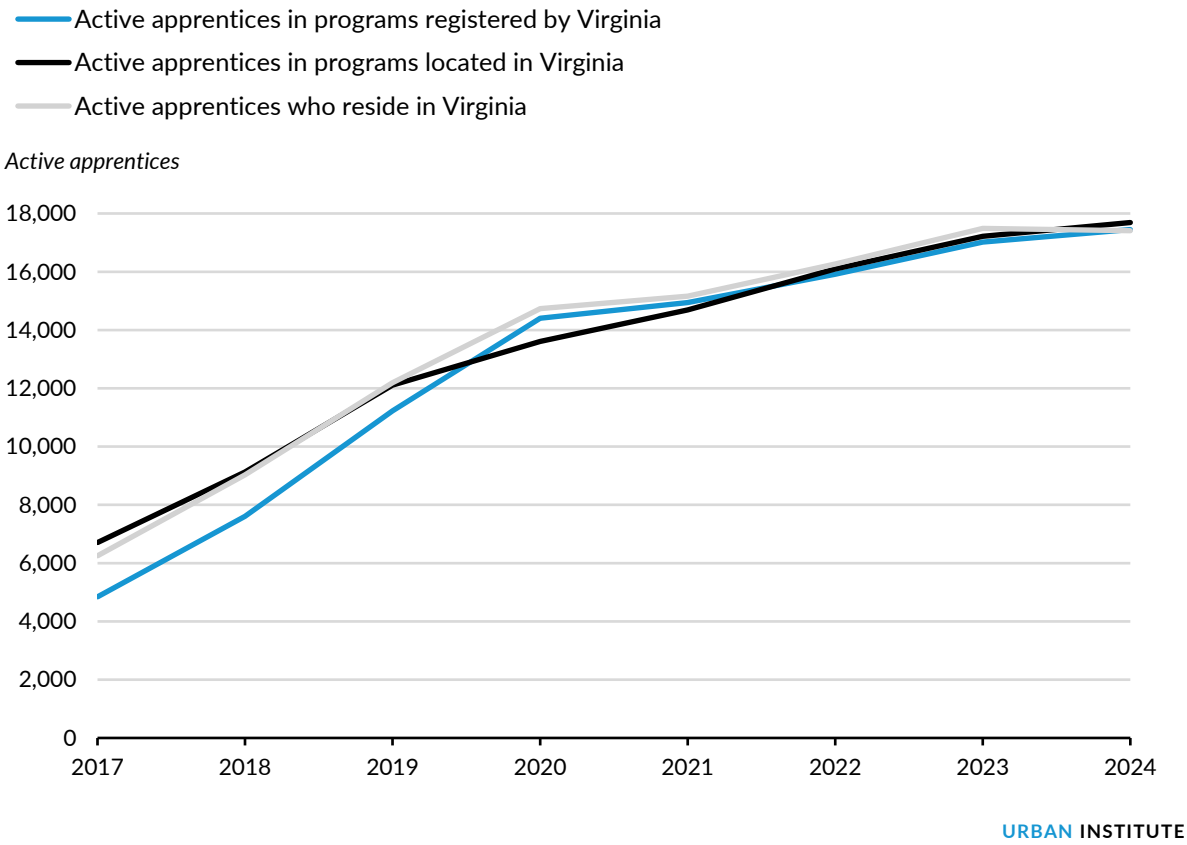
programs located in Virginia. This could include programs registered by Virginia, as well as nationally registered programs located in Virginia.

3. **Apprentices who reside in Virginia**. Finally, RAPIDS identifies the state in which apprentices reside, so we can identify Virginia residents registered as apprentices. Apprentices who reside in Virginia may be working at a job site in a neighboring state or in Virginia.

The number of active Virginia registered apprentices grew steadily between 2017 and 2024, from approximately 6,000 active apprentices in 2017 to almost 18,000 apprentices in 2024 (figure 1). The rate of growth of active apprentices declined after 2020, reflecting the challenges of the COVID-19 pandemic, which affected apprentice growth in many states (Ruggiero and Krantz 2023). Between 2017 and 2020, the average annual growth rate for active apprentices in programs located in Virginia was 27 percent. Between 2020 and 2024, this rate dropped to 6.8 percent. Nevertheless, the number of active Virginia apprentices did not decline during the pandemic.

FIGURE 1

Active Virginia Registered Apprentices, 2017–24

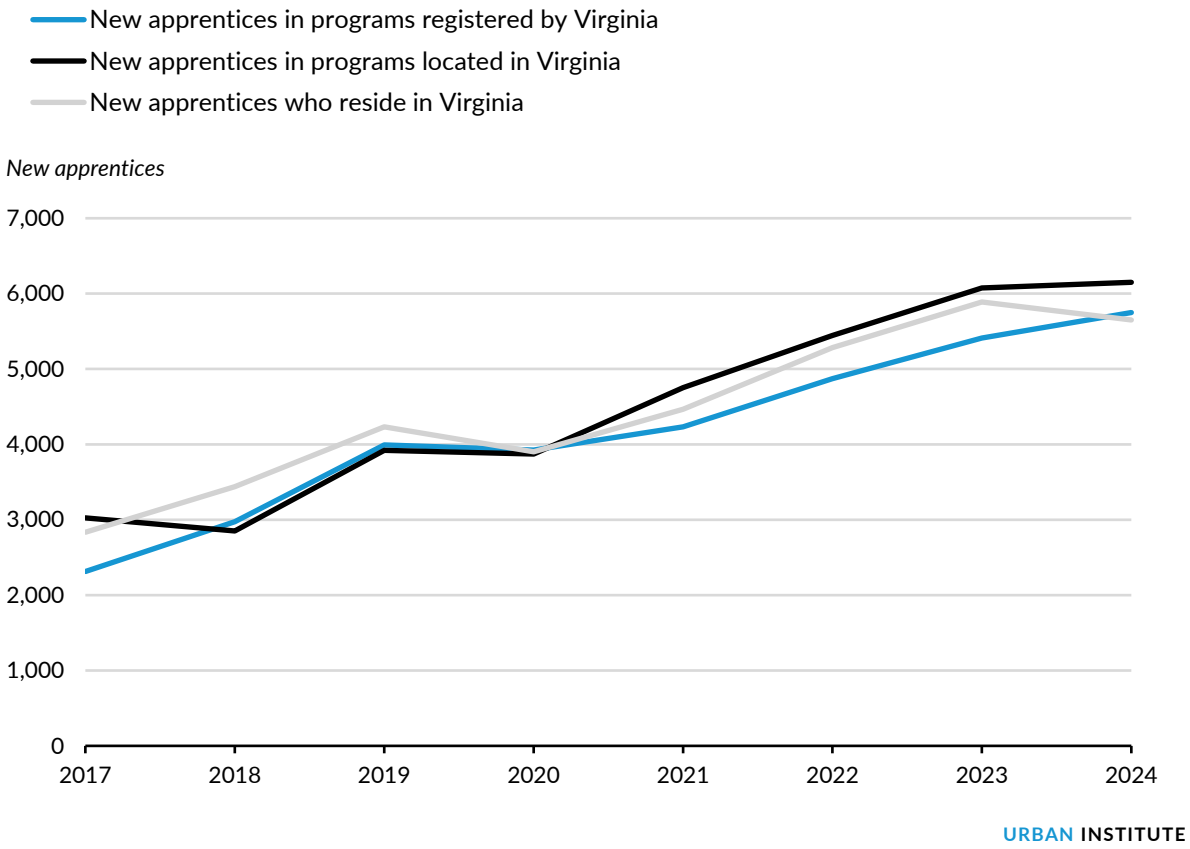


Source: Author's calculations from the Registered Apprenticeship Partners Information Data System, obtained from the US Department of Labor, May 6, 2025.

The number of new Virginia apprentices registered grew at a more consistent pace between 2017 and 2024 than the total number of active apprentices (figure 2). The pandemic is more apparent in the number of new apprentices than in the number of active apprentices, with a decline in new apprentices registered between 2019 and 2020. But average annual growth rates for new apprentices in programs located in Virginia between 2017 and 2020 are relatively comparable with average annual growth rates between 2020 and 2024 (10.2 percent compared with 12.5 percent).

FIGURE 2

New Virginia Registered Apprentices, 2017–24



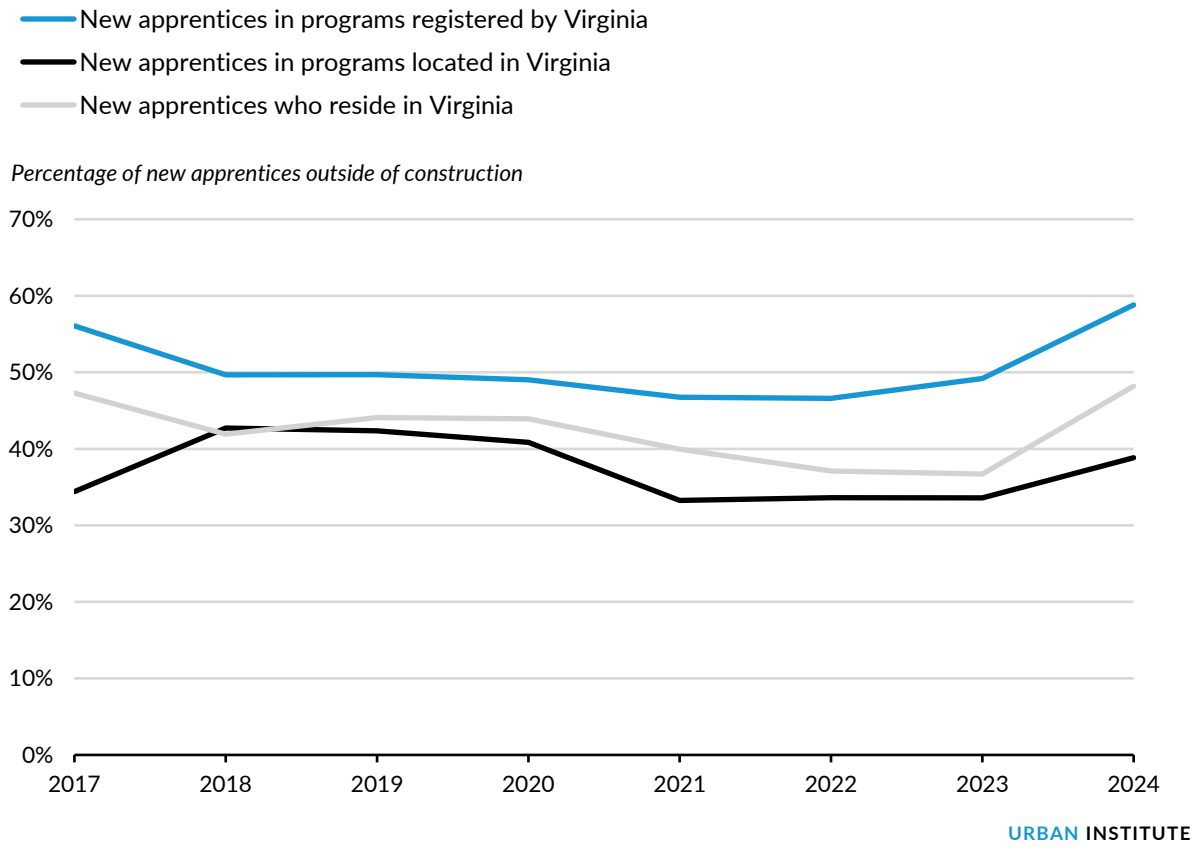
Source: Author's calculations from the Registered Apprenticeship Partners Information Data System, obtained from the US Department of Labor, May 6, 2025.

Registered apprenticeship programs in construction have formed the backbone of the apprenticeship system for decades. To build on this success, many state policymakers have been interested in expanding apprenticeship to fields outside of construction (Gardiner and Petrov 2025). A survey of states receiving State Apprenticeship Expansion grants in 2016[4] found that the most common goal for these states going forward was to expand apprenticeship outside of construction (Sattar et al. 2020).

In Virginia, the share of new apprentices registered in nonconstruction programs grew between 2023 and 2024 after declining from 2019 to 2023 (figure 3). New apprentices in programs registered by the state of Virginia were the most likely to be registered outside of construction (59 percent in 2024), followed by new apprentices who reside in Virginia (48 percent in 2024), and new apprentices in programs located in Virginia (39 percent in 2024). This suggests that, as an SAA state, Virginia has done especially well registering programs that hire apprentices outside of construction.

FIGURE 3

Percentage of New Virginia Registered Apprentices Outside of Construction, 2017–24



Source: Author's calculations from the Registered Apprenticeship Partners Information Data System, obtained from the US Department of Labor, May 6, 2025.
Note: Apprentices are counted as being in construction if the two-digit Standard Occupational Classification code for their apprenticeship program is 47.

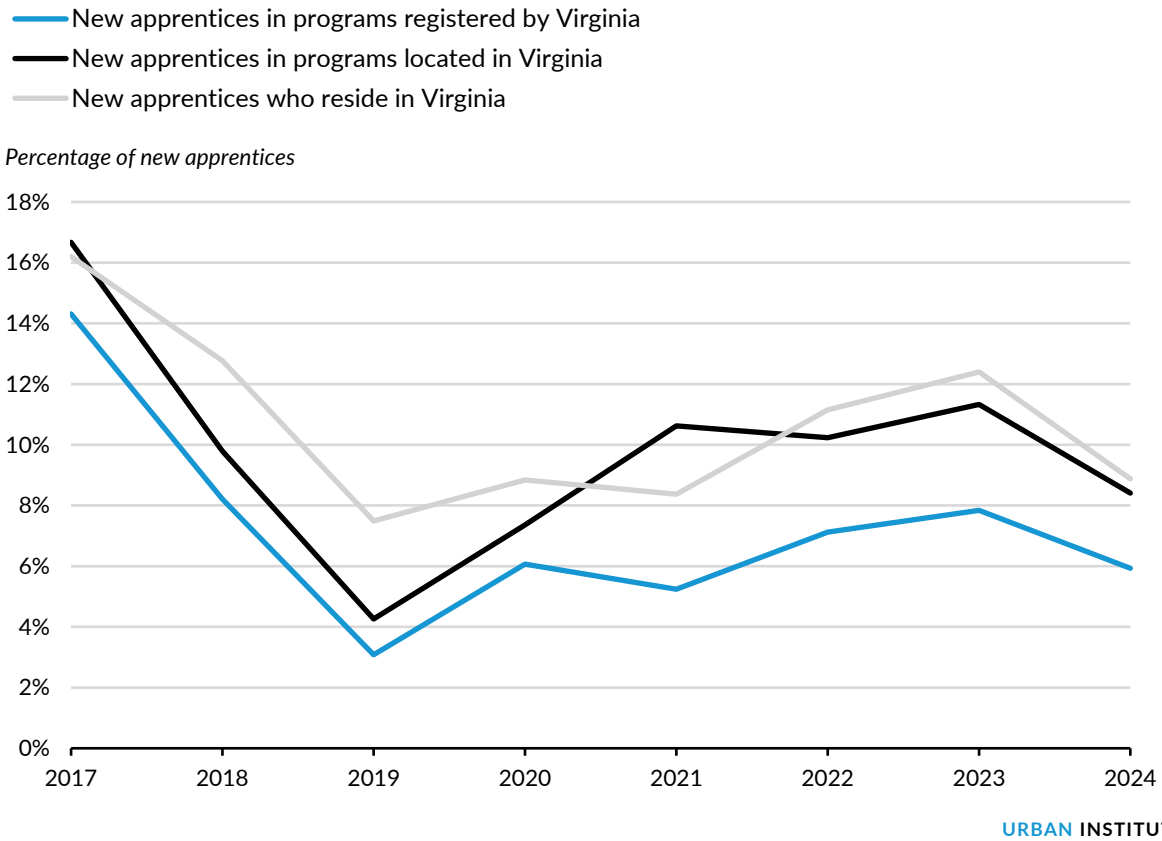
Governor-Elect Spanberger and other state and local policymakers are interested in supporting apprenticeship as a pathway to high-quality jobs and economic mobility. Job quality is multidimensional, but wages "are a foundational and central element of job quality" (Katz et al. 2022, 4). Apprenticeship is often used to train for entry-level jobs in a career pathway, and many apprenticeship positions in these jobs do not pay an hourly wage that is consistent with a living wage.

This may be mutually beneficial for youth apprentices who are still financially dependent on their parents and employers who would not otherwise hire youth, but in 2024, the average apprenticeship starting age for Virginia residents registered as an apprentice was 28.[5]

In 2017, about 15 percent of new Virginia apprentices earned inflation-adjusted starting hourly wages higher than the $25.65 living wage identified by the Massachusetts Institute of Technology Living Wage Calculator for Virginia for one adult (figure 4).[6] The share of apprentices starting their apprenticeship at that living wage or higher declined between 2017 and 2019 but then gradually increased between 2019 and 2023, before declining again in 2024.

FIGURE 4

Percentage of New Virginia Registered Apprentices with Starting Hourly Wages Higher Than $25.65 (2025 Dollars), 2017–24



Source: Author's calculations from the Registered Apprenticeship Partners Information Data System, obtained from the US Department of Labor, May 6, 2025.
Notes: A wage threshold of $25.65 was used based on the Massachusetts Institute of Technology Living Wage Calculator for Virginia, updated February 10, 2025. Apprentice starting wages are adjusted to February 2025 dollars using the Consumer Price Index.

New apprentices outside of construction were significantly more likely than construction apprentices to earn inflation-adjusted starting wages higher than $25.65 (figure 5). All the growth in

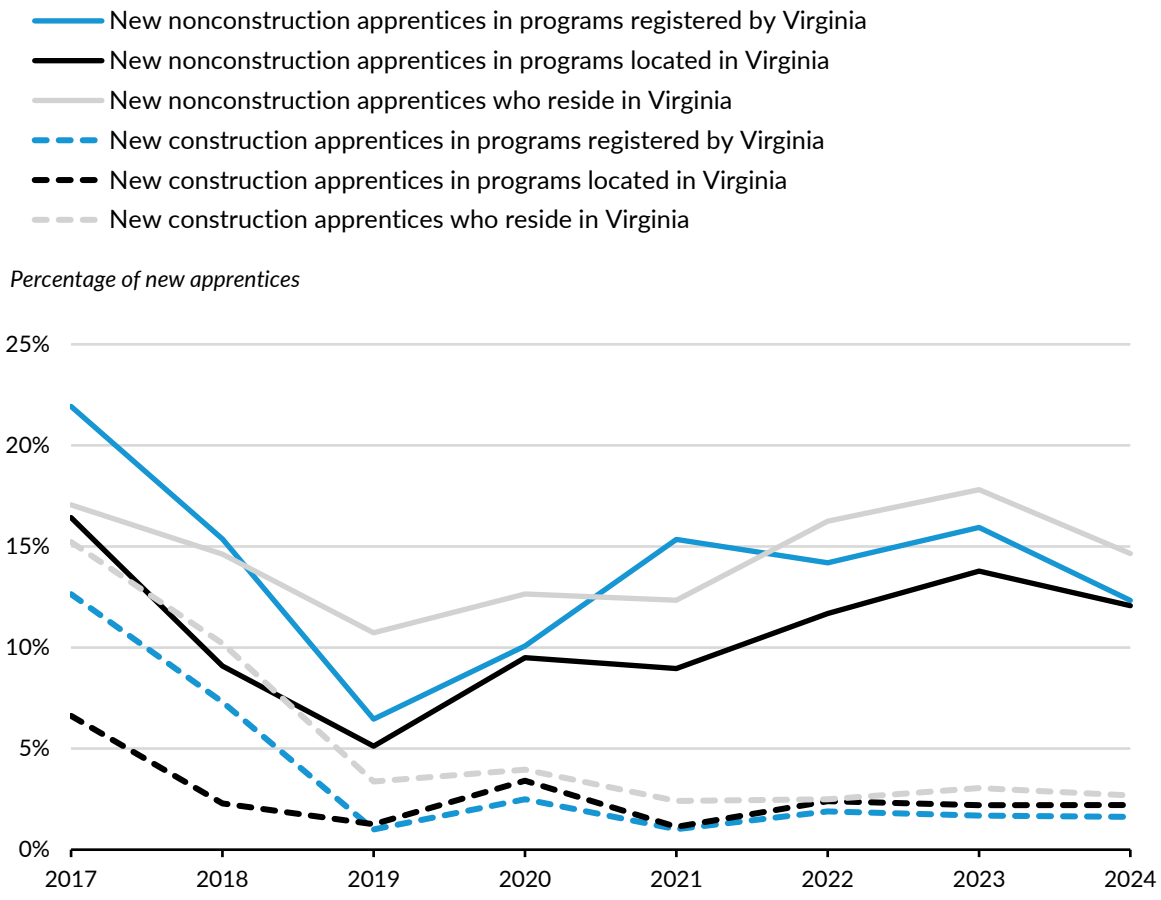
the share of new apprentices earning more than $25.65 is attributable to apprentices outside of construction. This may be unexpected, since skilled trade jobs in construction are generally well paying. But most multiyear registered apprenticeship programs in the trades start apprentices at a fraction of the journeyman's wage, ensuring that many—though not all—apprentices on a career pathway to a job that pays a living wage are not earning a living wage at the start of their apprenticeship.

Virginia apprentices in construction programs that did earn a living wage were more likely to be registered with union programs (51.6 percent) than Virginia apprentices in construction who did not earn a living wage (36.7 percent). The RAPIDS database does not include information on nonwage benefits such as health insurance or retirement plans, which apprentices may also receive. The largest unions jointly sponsoring apprenticeship programs where construction apprentices earned a living wage in 2024 were the International Union of Elevator Constructors, the International Brotherhood of Electrical Workers, and the Boilermakers Southeastern Area Joint Apprenticeship Committee.

The most common jobs outside of construction in which Virginia apprentices earned a living wage at the start of their apprenticeship were utilities (e.g., electrical power line installers), health care (e.g., licensed practical nurses and registered nurses), and manufacturing (e.g., industrial machinery mechanics, machinists, and electro-mechanical and mechatronics technologists).[7]

FIGURE 5

Percentage of New Virginia Registered Apprentices with Starting Hourly Wages Higher Than $25.65 (2025 Dollars), 2017–24



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Source: Author's calculations from the Registered Apprenticeship Partners Information Data System, obtained from the US Department of Labor, May 6, 2025.
Notes: A wage threshold of $25.65 was used based on the Massachusetts Institute of Technology Living Wage Calculator for Virginia, updated February 10, 2025. Apprentice starting wages are adjusted to February 2025 dollars using the Consumer Price Index.

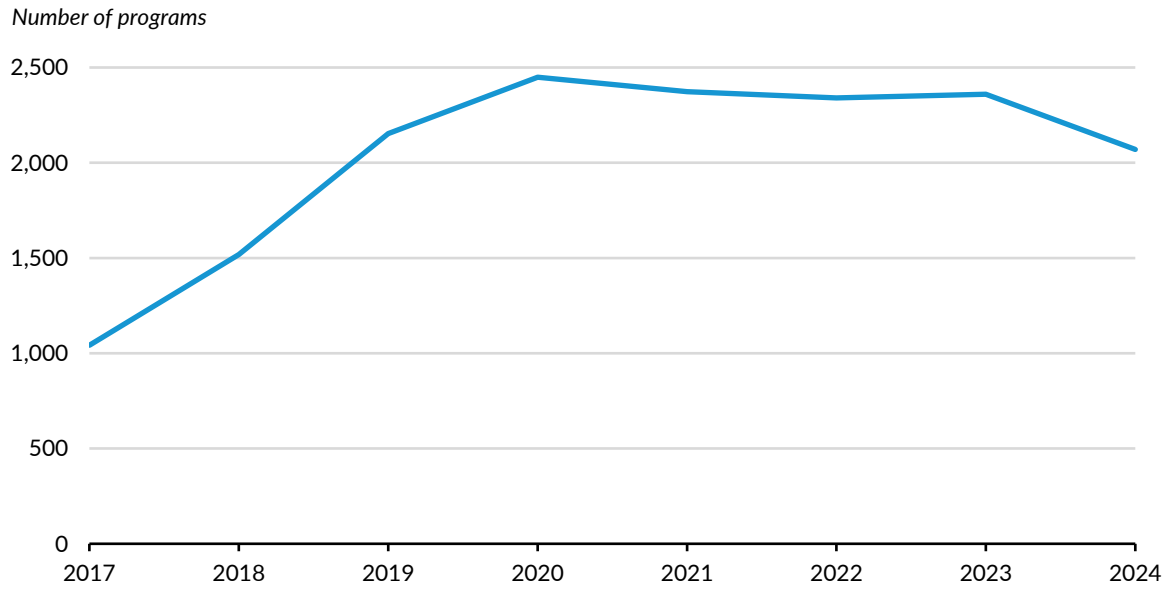
Virginia's apprenticeship growth has therefore been consistently strong, with regular annual increases in both the total number of apprentices and the number of new apprentices. The state has seen modest growth in the share of new apprentices outside of construction and the share of apprentices outside of construction earning a living wage since 2019.

Growth in Registered Apprenticeship Programs

For as long as the OA has reported the statistic, Virginia has always had more active registered apprenticeship programs than any other state.[8] Registered apprenticeship programs with at least one active apprentice in Virginia grew from 1,042 programs in 2017 to a peak of 2,449 programs in 2020, declining to 2,070 programs in 2024 (figure 6).[9]

FIGURE 6

Apprenticeship Programs Registered by Virginia with Active Apprentices, 2017–24

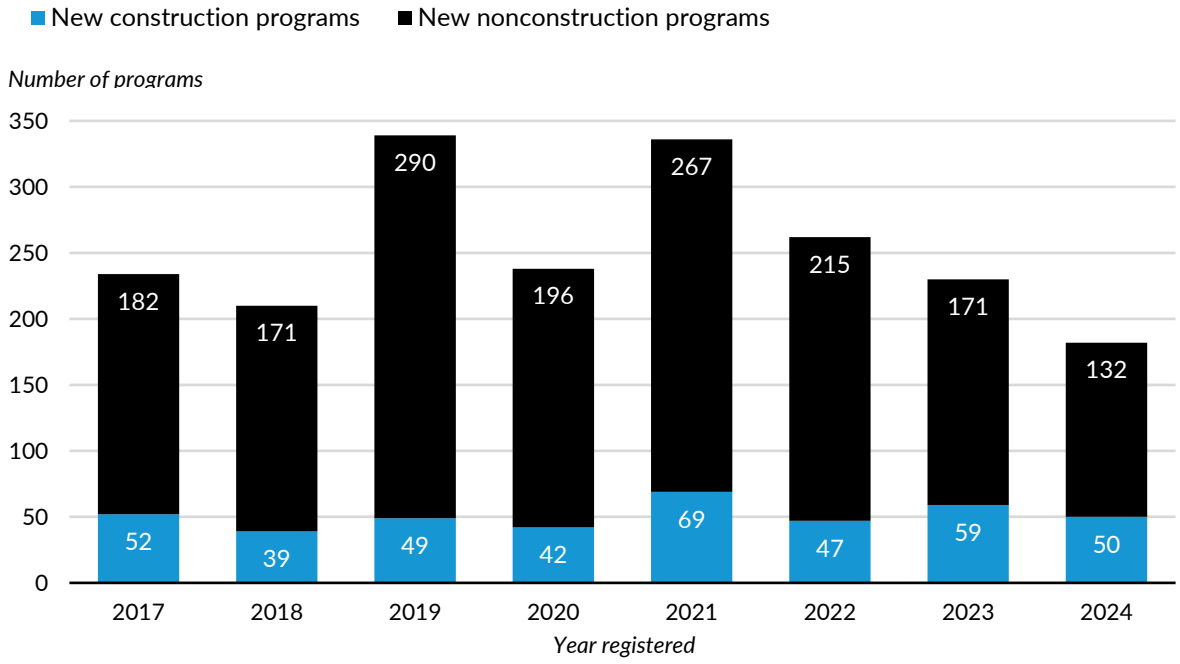


Source: Author's calculations from the Registered Apprenticeship Partners Information Data System (RAPIDS), obtained from the US Department of Labor, May 6, 2025.
Notes: Because a program sponsor can register multiple programs, registered apprenticeship programs are identified as unique combinations of individual program sponsors and RAPIDS occupational codes.

The number of apprenticeship programs registered by Virginia with active apprentices has remained relatively steady since 2020 (figure 6), but Virginia continues to register new programs. Between 2017 and 2024, the number of new nonconstruction programs registered by Virginia has always been more than double the number of new construction programs (figure 7). This reflects both registration agencies' recent focus on expanding apprenticeship in nontraditional sectors and that many construction programs already exist and can expand to meet the demand for new workers. Since 2017, the years with the highest number of new programs registered with Virginia were 2019 (290 nonconstruction programs and 49 construction programs) and 2021 (267 nonconstruction programs and 69 construction programs).

FIGURE 7

New Construction and Nonconstruction Apprenticeship Programs Registered by Virginia with Active Apprentices, 2017–24



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Source: Author's calculations from the Registered Apprenticeship Partners Information Data System, obtained from the US Department of Labor, May 6, 2025.
Note: Apprentices are counted as being in construction if the two-digit Standard Occupational Classification code for their apprenticeship program is 47.

The number of new programs registered by the state has declined every year since 2021, with a disproportionate share of the decline being in the number of new nonconstruction programs. This decline in new program registration by Virginia may be a factor in the slowed growth in active apprentices (figure 1) and the decline in programs with active apprentices (figure 6) during the same period. But if these trends are related, it has not resulted in a decline in or even a slowing of the growth of new Virginia apprentices (figure 2). Virginia is in a unique position of strength with its large stock of registered apprenticeship programs that are operating and ready to train apprentices. But the policies of the incoming Spanberger administration should be informed by a deeper investigation of these dynamics between program registration and apprentice registration.

Data Note

The analyses for this brief use individual-level RAPIDS data obtained from the US Department of Labor for research purposes on May 6, 2025. As a case management system, RAPIDS is continuously updated by states and program sponsors to reflect changes in apprentice and program status. For that reason, the data used here may differ from prior extracts from RAPIDS or from subsequent updated

data. Because the Department of Labor provided unprocessed RAPIDS data, exact apprentice and program counts produced here may differ from the Department of Labor dashboard,[10] which uses an extract from a different date and reports data by federal fiscal year rather than calendar year.

Apprenticeship program sponsors can sponsor multiple training programs, so registered apprenticeship programs are identified for the purposes of this brief as unique combinations of individual program sponsors and RAPIDS occupational codes. An apprentice is considered "active" in a calendar year if they started their program at some point during that year, were registered continuously through the year, or exited their program during that year.

Notes

1 For details on the HIRED Apprenticeship Fund, see "Announcing Virginia's HIRED Apprenticeship Fund," Virginia Works, accessed December 9, 2025, https://virginiaworks.gov/apprenticeshipfund/.

2 For details on the Apprenticeship Pathway Program for Employers, see Virginia Works, "Announcing $1.1 Million in Funding Opportunities to Expand Training and Employment," press release, October 10, 2025, https://virginiaworks.gov/announcing-1-1-million-in-funding-opportunities-to-expand-training-and-employment/.

3 For details on the Apprenticeship Pathway Program for CTE Programs, see Virginia Works, "Announcing $1.1 Million in Funding Opportunities."

4 These findings are for the 36 states and one territory that were awarded a total of $100 million in State Apprenticeship Expansion (SAE) grants in 2016. Virginia was not awarded an SAE grant in 2016.

5 Author's calculations from RAPIDS.

6 For the Living Wage Calculator, see https://livingwage.mit.edu/states/51.

7 Author's calculations from RAPIDS. These are the six most common occupations, as defined by six-digit Standard Occupational Classification codes, for nonconstruction apprentices residing in Virginia and active in 2024 who earned above $25.65 an hour.

8 For data going back to federal fiscal year 2011, see "FY 2011 Data and Statistics," US Department of Labor, Employment and Training Administration, accessed December 9, 2025, https://www.dol.gov/agencies/eta/apprenticeship/about/statistics/2011.

9 These program counts are lower than the counts provided on the OA data and statistics page because the OA does not restrict its program count to registered programs with an active apprentice.

10 See "Apprentices by State," ApprenticeshipUSA, accessed December 9, 2025, https://www.apprenticeship.gov/data-and-statistics/apprentices-by-state-dashboard.

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