2022 NORTHERN VIRGINIA
WORKFORCE INDEX
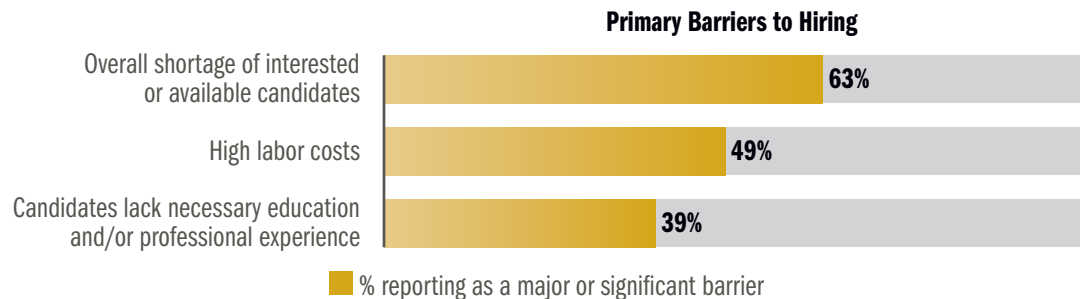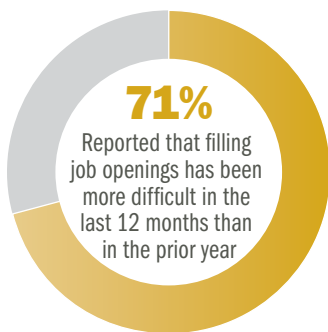
NORTHERN VIRGINIA
CHAMBER OF COMMERCE

NOVA | Northern Virginia
Community College

NORTHERN VIRGINIA CHAMBER FOUNDATION

2022 NORTHERN VIRGINIA
WORKFORCE INDEX
Executive Summary

A tight labor market and high labor costs have made hiring and retaining talent an ongoing challenge for many businesses in Northern Virginia.

71%
Reported that filling job openings has been more difficult in the last 12 months than in the prior year

Primary Barriers to Hiring

Overall shortage of interested or available candidates	63%
High labor costs	49%
Candidates lack necessary education and/or professional experience	39%

■ % reporting as a major or significant barrier

Businesses continue to rely on online job boards, internal hiring, and employee referrals to recruit talent. Work-based learning approaches such as internships and apprenticeships are underutilized and offer prime opportunities to expand recruitment.
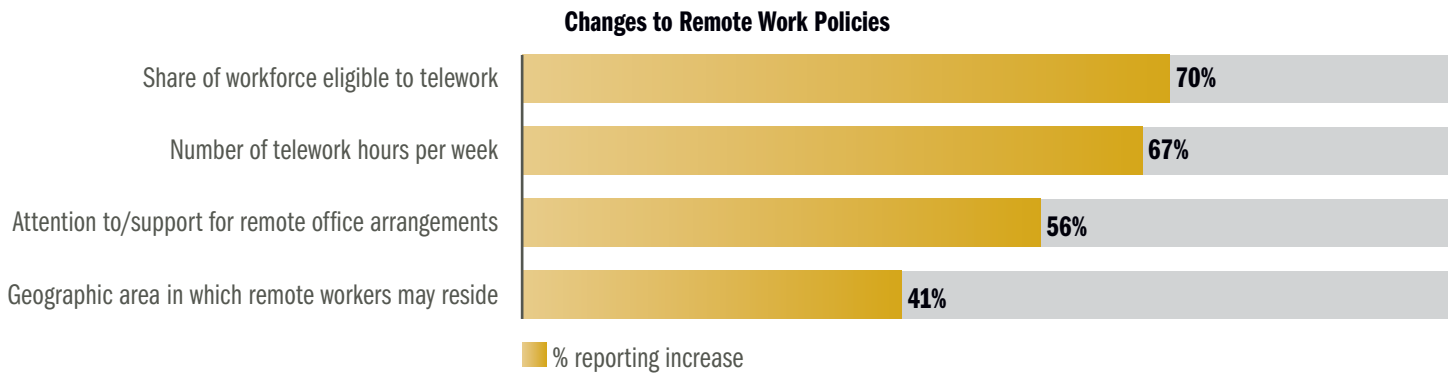
Most Common Hiring Sources

	% using	% very often/always hired
Word of mouth/employee referral	92%	43%
Online job boards	75%	48%
Internal hiring/advancement	69%	45%

■ % using   ■ % saying candidates from this source are very often or nearly always hired
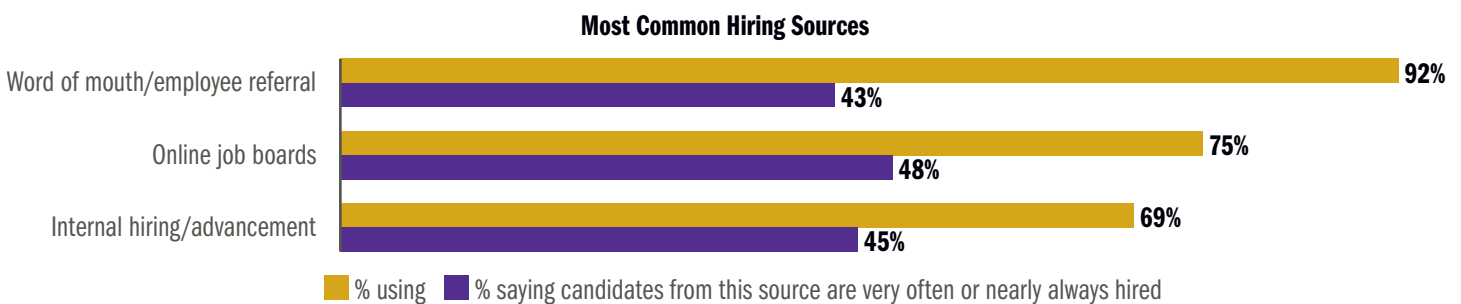
49%
Reported employing at least one intern over the past 12 months

15%
Recruit through apprenticeships

Despite the easing of COVID-19 restrictions, remote work is still top of mind for businesses.

Changes to Remote Work Policies

Share of workforce eligible to telework	70%
Number of telework hours per week	67%
Attention to/support for remote office arrangements	56%
Geographic area in which remote workers may reside	41%

■ % reporting increase

Professional services businesses in the region that have increased the share of their workforce that is eligible for telework since early 2020 had, on average, fewer resignations over the past 12 months than businesses that reduced eligibility or kept it the same.

Employers in Northern Virginia rely heavily on formal educational credentials as part of the hiring process.

25%
Consider level of education to be very important or essential when making hiring decisions

42%
Are rarely or never willing to accept equivalent professional experience

Although employment has largely returned to pre-pandemic levels, the economic outlook, both regionally and nationally, remains uncertain. A tight labor market, high labor costs, and high inflation are making it more difficult for businesses in Northern Virginia to hire and retain talent. However, many hiring approaches that could address these challenges remain underutilized.

The *Northern Virginia Workforce Index,* originally developed in 2021 through a partnership between the Northern Virginia Chamber of Commerce and Northern Virginia Community College (NOVA), is an annual employer survey and report that provides data on employer sentiment and workforce practices specific to the Northern Virginia region.

To download a copy of the full *2022 Workforce Index Report,* please visit:
www.novachamber.org/northern_virginia_workforce_index

NORTHERN VIRGINIA CHAMBER OF COMMERCE

NOVA | Northern Virginia Community College

NORTHERN VIRGINIA CHAMBER FOUNDATION

INTRODUCTION

As we move into a fourth year following the outbreak of the COVID-19 pandemic, the national economic outlook does not appear to be any more certain than when we released the first annual *Northern Virginia Workforce Index* in Fall 2021. While employment has largely returned to, if not surpassed, pre-pandemic levels, both nationally and regionally, labor markets remain tight, with demand for talent outpacing supply. Although inflation—at its highest level in 40 years—appears to have peaked in mid-2022, prices remain high, accompanied by higher nominal wages for employees and higher labor costs for businesses. A drop in job openings suggests that the labor market is cooling, but experts remain divided as to whether the country will face a recession in 2023.[1]

Whatever the coming year holds in store, detailed and actionable intelligence on local labor market conditions, especially employer workforce needs, remains a vital component of understanding and planning for the future. The *Northern Virginia Workforce Index*, originally developed in 2021 through a partnership between the Northern Virginia Chamber of Commerce and Northern Virginia Community College (NOVA), is an annual employer survey and report that provides data on employer sentiment and workforce practices specific to the Northern Virginia region.

The second annual *Northern Virginia Workforce Index* builds on last year's work by asking employers new and more detailed questions about topics of interest. A new probability-based survey design, distributed to an even larger, randomized sample of businesses, also ensures that responses are reflective of Northern Virginia's entire business landscape, producing results that can be more accurately compared year-to-year.

Among the results of this year's survey, we find that businesses in Northern Virginia...

▸ Are less optimistic about the economy's near-term outlook than last year. While levels of employment have returned to normal and most businesses are maintaining their existing workforce, finding and keeping new candidates continues to be a primary challenge/concern.

▸ Continue to rely on online job boards, internal hiring, and word-of-mouth recruitment for talent. Fewer businesses utilize other methods such as apprenticeships or internships.

▸ Still face strong demand for remote work options, keeping the issue front of mind. This poses challenges for employers unable to offer these options—businesses offering fewer remote work options reported greater challenges hiring over the last year, while businesses that increased remote work eligibility saw, on average, fewer resignations.

▸ Place a heavy emphasis on formal educational credentials. Few employers are regularly willing to substitute equivalent work experience for education requirements when hiring.

SURVEY OVERVIEW

Between October 14 and December 9, 2022, 237 regional business leaders responded to a series of 32 survey questions covering a range of workforce and talent-related topics. The topics covered in this year's survey remain the same as those covered last year. However, with the guidance of the University of Virginia (UVA) Center for Survey Research (CSR), the questionnaire was updated to even more accurately measure these topics of interest. Updates included rewording certain questions, providing more detailed response options, and providing additional response options based on last year's survey. Several questions have also been added in response to business and partner feedback.

The survey was directed to the individual at each business who was most familiar with hiring, talent development, and human resources decisions. Among those individuals who responded on behalf of their business, over half (55%) were members of the C-suite/executive leadership (including vice presidents of human resources), 23% were human resources managers/directors or other HR professionals, and 22% identified as some other type of manager or employee with requisite knowledge. Among these individuals, 72% have been employed at their responding business, in Northern Virginia, for more than five years.

The survey was administered using two different methods:

▸ **Probability-based:** survey invitations and questionnaires were distributed by mail to a random sample of Northern Virginia businesses by the UVA CSR, with options to respond online or by return mail. CSR also conducted preliminary calling to verify business contact information, as well as follow-up calling to improve response rates.

▸ **Non-probability-based:** an online survey link was distributed by email to Northern Virginia Chamber of Commerce members, as well as the business affiliates of local workforce boards and economic development agencies (see Acknowledgements).

For the purposes of this summary report, responses gathered using both methods have been pooled/aggregated (with a total of 191 probability-based responses and 46 non-probability-based responses). Businesses were included in the survey sample if they have a location/establishment or employees within Northern Virginia, which is defined as the nine Commonwealth of Virginia jurisdictions included under the Region 8 planning district commission, or as part of the NOVA service area.[I] Among responding businesses, 61% have just one location, 36% have multiple locations, and two are fully remote.

Responses are weighted to account for sampling design (i.e., base weights) as well as to adjust for differing rates of response and ensure that the combined sample is reflective of Northern Virginia's employer landscape in terms of industry sector and business size (i.e., post-stratification weights). The random sample of businesses used in the probability-based data collection was provided by Dynata, Inc., a third-party reseller of listings from Dun & Bradstreet's comprehensive business database. Post-stratification weights based on business industry and size reflect the distribution of Northern Virginia businesses in this database.

Table 1 compares the unweighted frequency of responses for each demographic characteristic to frequencies following application of these weights. From this comparison, it is apparent that businesses in the raw materials and social services/wellbeing categories were overrepresented in survey responses compared to the number of businesses in the region while businesses in the business support and sales/personal services categories were underrepresented. Similarly, smaller businesses (between five and nine employees) were underrepresented in survey responses, while larger business (particularly those with 100 - 499 employees) were overrepresented.

Table 1: Business Establishment Demographics – Shares of Responses

Industry Category	Unweighted	Weighted		Size Category	Unweighted	Weighted
Raw Materials	12%	8%		5 to 9 employees	30%	49%
Business Support	11%	14%		10 to 19 employees	27%	25%
Financial/Intellectual Services	32%	33%		20 to 99 employees	21%	20%
Sales/Personal Services	18%	28%		100 to 499 employees	17%	5%
Social Services/Wellbeing	27%	17%		500+ employees	5%	2%

Note: Due to the survey's focus on workforce issues like hiring and retention, sole proprietorships as well as businesses with between one and four employees were excluded from both samples.

Results reported throughout the remaining sections of this report are based on these weighted responses. Any reported frequencies only include "valid" responses.[II] That is, cases where a respondent did not answer a question, or where the answer was "Don't know/not sure" or "Not applicable," are not included in the totals when calculating percentages.

For additional details regarding the survey design and methodology, see the Appendix.

I These include Alexandria City, Arlington County, Fairfax City, Fairfax County, Falls Church City, Loudoun County, Manassas City, Manassas Park City, and Prince William County.

II Cumulative frequencies may not sum due to rounding.

OVERALL BUSINESS/ECONOMIC OUTLOOK

Northern Virginia businesses' economic outlook was decidedly more pessimistic this year than it was last year: 33% reported being either "somewhat pessimistic" or "very pessimistic" about the regional economy's prospects over the next year, while 38% reported feeling optimistic (*Figure 1*). In 2021, however, three-quarters of *Workforce Index* respondents reported feeling at least somewhat optimistic about the economy and only 10% were pessimistic. Despite mixed feelings on the economy overall, respondents to this year's *Index* felt better about their businesses' prospects over the next year, with 57% reporting feeling at least somewhat optimistic (*Figure 1*). Still, this was lower than the 80% that were optimistic about their businesses in last year's survey.[2]

It is worth noting that respondents to this survey had a slightly more optimistic view about their businesses than respondents to the Census Bureau's Business Trends and Outlook Survey (BTOS), which collects data every two weeks from a sample of businesses nationwide.[3] As of December 2022, only 35% of BTOS respondents in the Washington, D.C. metro area (MSA) said their business was doing above average or excellent.[4]

Figure 1: Business and Economic Outlooks

What is your level of optimism regarding the economy's overall prospects over the next year?

Pessimistic			Optimistic	
6%	27%	29%	30%	8%
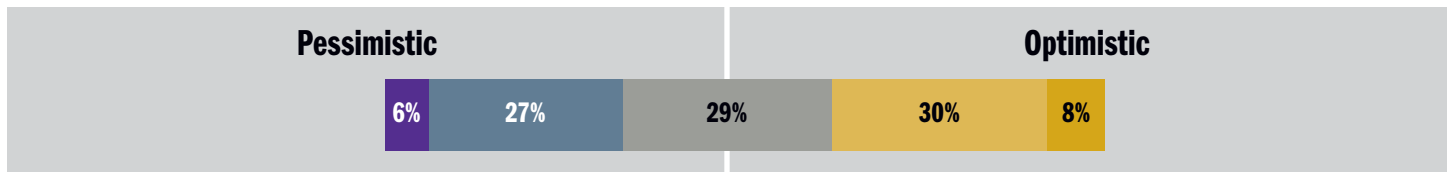
What is your level of optimism regarding your business's prospects over the next year?

| Pessimistic			Optimistic	
6%	16%	20%	41%	16%
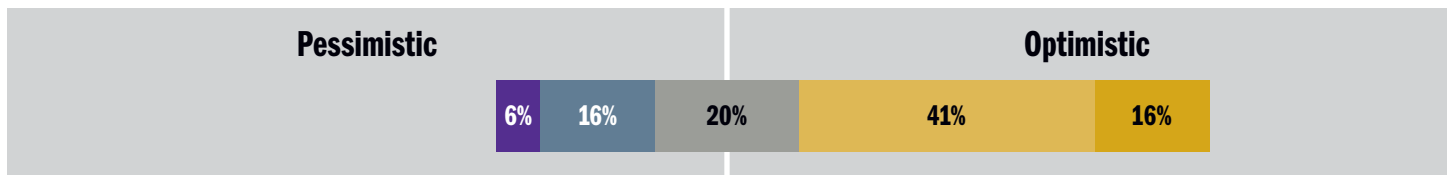
■ Very pessimistic ■ Somewhat pessimistic ■ Neither pessimistic nor optimistic ■ Somewhat optimistic ■ Very optimistic

Despite businesses' pessimism about the overall state of the economy, unemployment has remained at pre-pandemic rates since early 2022. As of October 2022, unemployment in Northern Virginia is down to just 2.3%, only 0.1 percentage point higher than the 2019 average (*Figure 2*). Unemployment rates in the D.C. MSA and in the United States as of October 2022 were 3.3% and 3.4%, respectively, also within one percentage point of 2019 averages.

## Figure 2: Unemployment Rate – Percentage Point Difference from 2019 Average
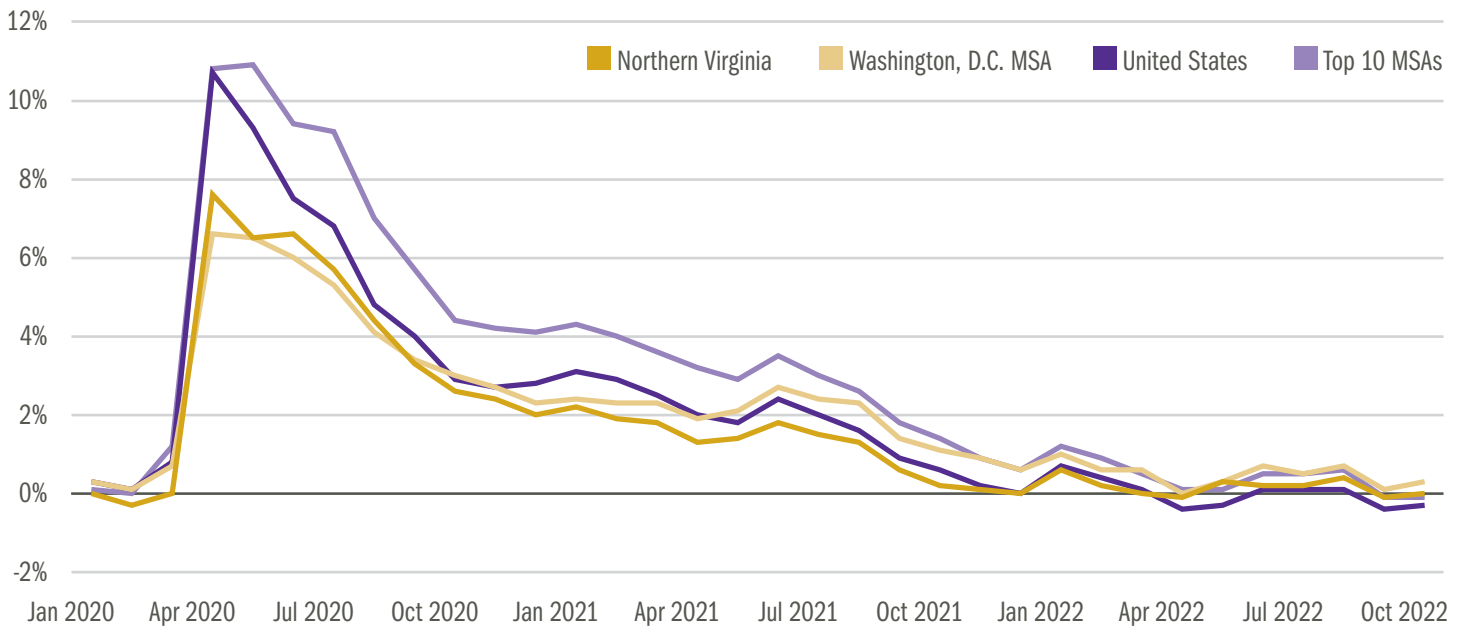
Source: U.S. Bureau of Labor Statistics, "Unemployment rates by county, not seasonally adjusted," *Local Area Unemployment Statistics,* accessed December 12, 2022, www.bls.gov/lau/data.htm; U.S. Bureau of Labor Statistics, "Employment status of the civilian noninstitutional population, not seasonally adjusted," *Current Population Survey,* accessed December 12, 2022, www.bls.gov/cps/data.htm.

Note: The top 10 MSAs in the United States, ranked by population as of the 2020 census, are: New York City, Los Angeles, Chicago, Dallas-Fort Worth, Houston, Washington, D.C., Philadelphia, Miami, Atlanta, and Boston.

Employment in Northern Virginia has also continued to steadily increase and was 1.2 percentage points higher than the 2019 average as of October 2022. Employment across the Washington, D.C. MSA was also one percentage point lower than it was in 2019, indicating a slowing recovery across our larger region (*Figure 3*).

## Figure 3: Employment – Percentage Change from 2019 Average
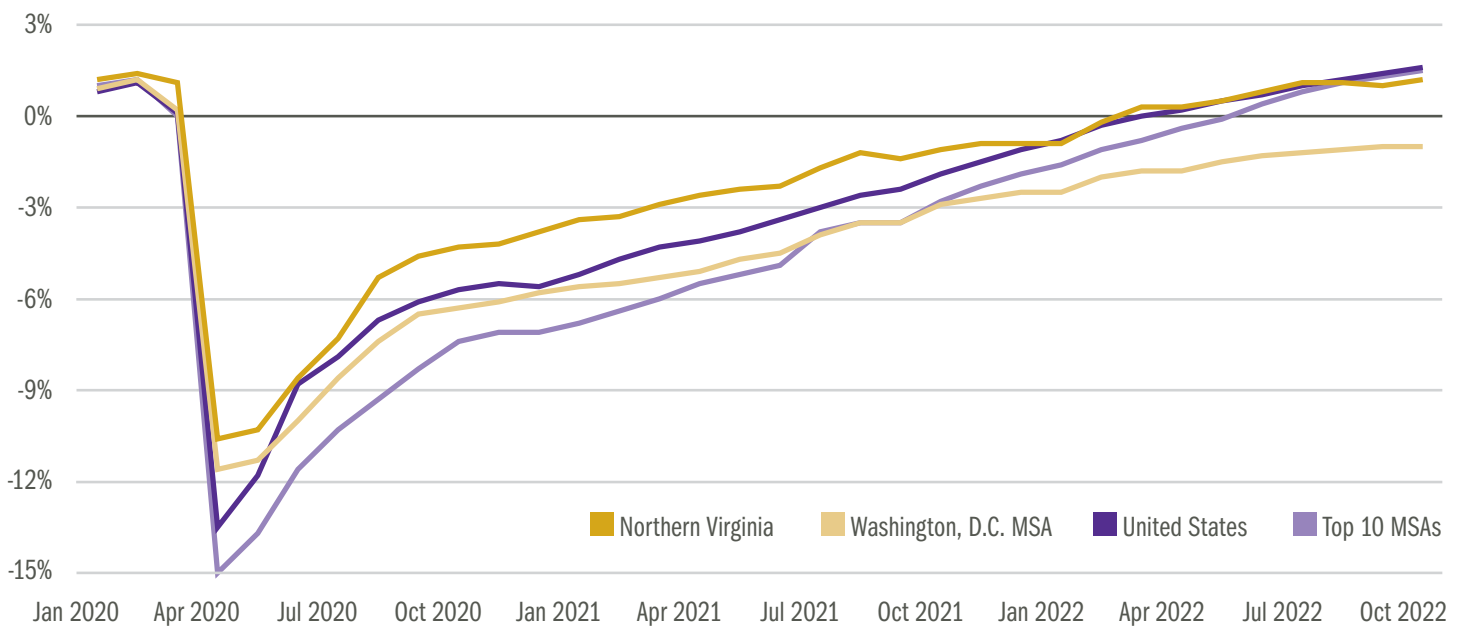
Source: U.S. Bureau of Labor Statistics, "Employees on nonfarm payrolls, seasonally adjusted," *Current Employment Statistics (State and Metro Area),* accessed December 12, 2022, www.bls.gov/sae/data.

Note: For the data in Figure 3, Northern Virginia is defined as the 17 Virginia jurisdictions that are included in the Washington, D.C. MSA.

In general, the number of paid employees has not changed significantly for most businesses (57%) in the last 12 months. Over a quarter (28%) have seen some sort of increase in employees, and an even smaller portion (15%) have seen a decrease. Very little change is anticipated in the coming year as well—just under a third of businesses are expecting to see a small increase in employment over the next 12 months, and the majority anticipate no significant change (*Figure 4*). While this does not account for changes due to turnover it does reinforce that the initially rapid recovery of jobs following the pandemic has started to slow in the region. Indeed, the share of respondents indicating no significant change in employment was lower last year while the share of businesses projecting future employment gains was much larger (63%).

Figure 4: Past and Future Employment Changes

In the last 12 months, how has the number of paid employees changed at your business in Northern Virginia?

Decrease			Increase	
8%	7%	57%	19%	9%
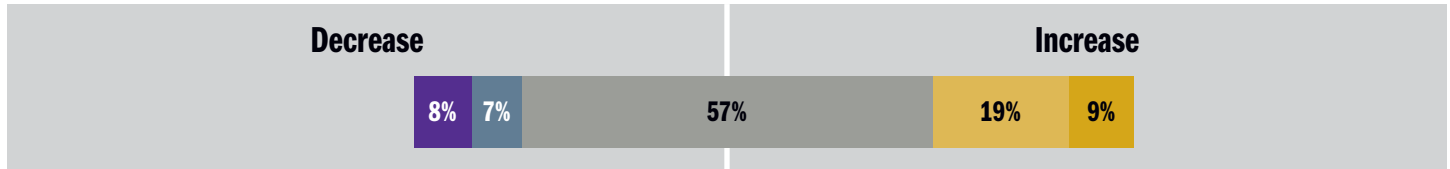
How does your business anticipate the number of paid employees in Northern Virginia will change over the next 12 months?

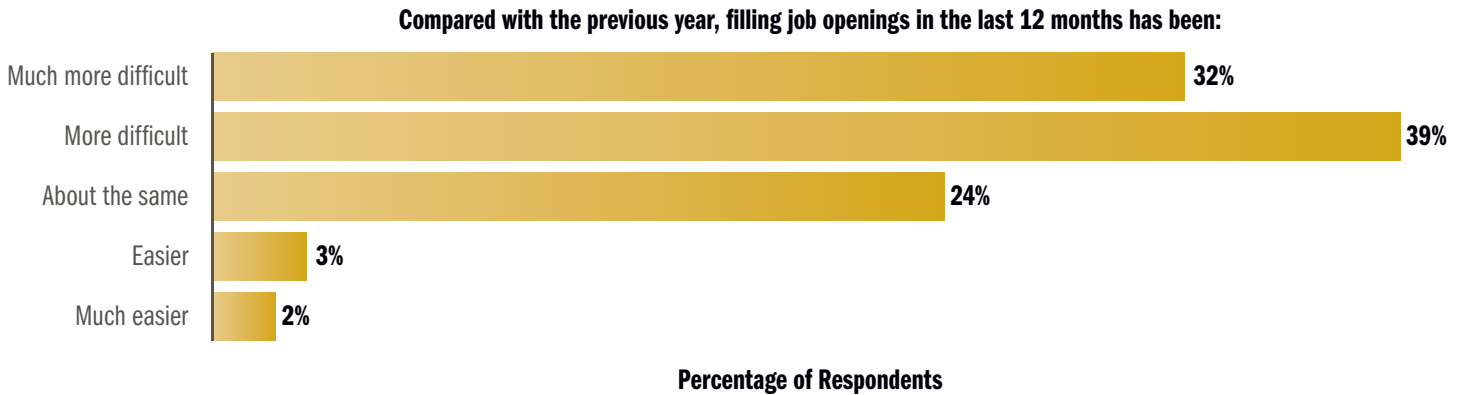| Decrease			Increase	
	6%	54%	30%	8%
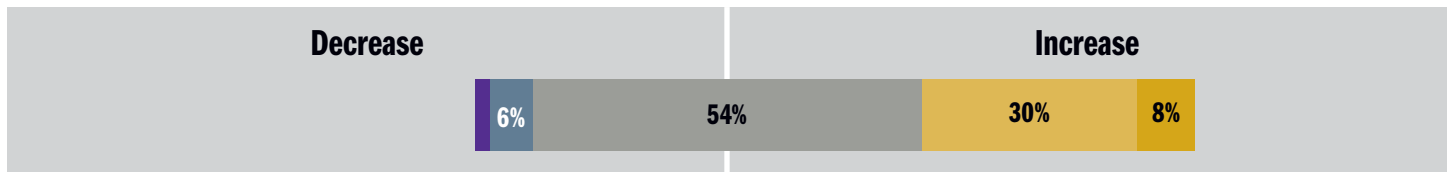
■ Significant decrease (≥15%)　■ Decrease (<15%)　■ No significant change　■ Increase (<15%)　■ Significant increase (≥15%)
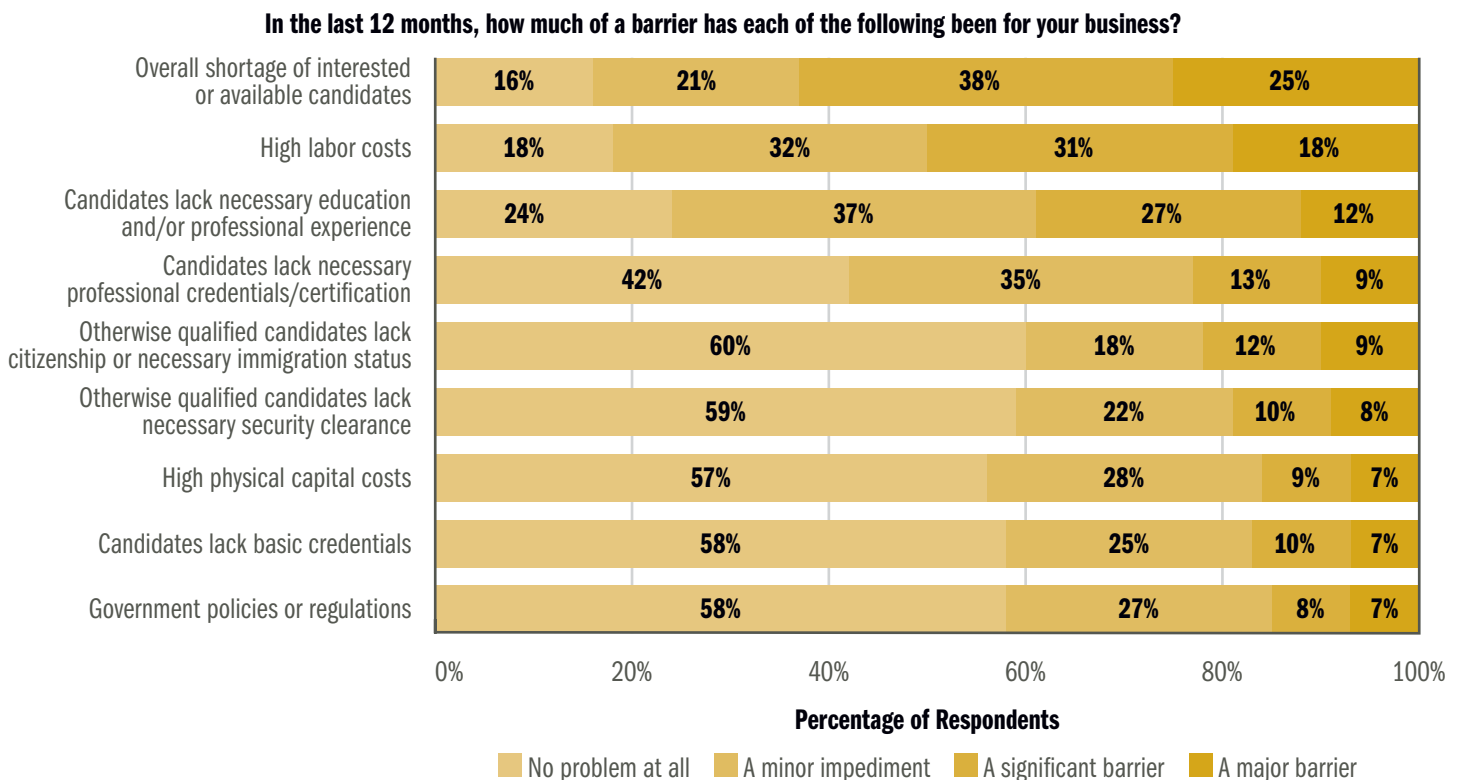
HIRING TRENDS AND CHANGES

In general, businesses are having a hard time hiring, with the vast majority (71%) stating that they had either a more difficult or much more difficult time filling job openings (*Figure 5*).

Figure 5: Difficulty Hiring

Compared with the previous year, filling job openings in the last 12 months has been:

Category	Percentage
Much more difficult	32%
More difficult	39%
About the same	24%
Easier	3%
Much easier	2%

Percentage of Respondents

The primary reasons for this difficulty were both an overall shortage of candidates and higher labor costs: 63% and 49% of businesses, respectively, identified these as either major or significant barriers to hiring over the last year. Over a third of respondents (39%) also identified a lack of necessary education or professional experience as a major or significant barrier (*Figure 6*). When given the chance to identify other barriers not included among available responses, businesses commonly cited candidates' desire for remote work and constant turnover in employment, issues that are addressed in the next section.

Figure 6: Barriers to Hiring

In the last 12 months, how much of a barrier has each of the following been for your business?

Barrier	No problem at all	A minor impediment	A significant barrier	A major barrier
Overall shortage of interested or available candidates	16%	21%	38%	25%
High labor costs	18%	32%	31%	18%
Candidates lack necessary education and/or professional experience	24%	37%	27%	12%
Candidates lack necessary professional credentials/certification	42%	35%	13%	9%
Otherwise qualified candidates lack citizenship or necessary immigration status	60%	18%	12%	9%
Otherwise qualified candidates lack necessary security clearance	59%	22%	10%	8%
High physical capital costs	57%	28%	9%	7%
Candidates lack basic credentials	58%	25%	10%	7%
Government policies or regulations	58%	27%	8%	7%

Percentage of Respondents

Legend: No problem at all | A minor impediment | A significant barrier | A major barrier

As with last year, however, an overall shortage of candidates continues to be the biggest challenge facing Northern Virginia businesses, likely due to the area's especially tight labor market. The number of unemployed per job opening ratio is one way the U.S. Bureau of Labor Statistics measures the tightness of the labor market. A ratio of 1.0 means that there is one job opening for every unemployed person; values below 1.0 indicate a tighter labor market, where there are more openings than individuals available to fill them (not accounting for skill or role), and values above 1.0 indicate a more slack labor market.[5] The unemployment per job openings ratio, as of October 2022, was 0.6 for the United States and 0.4 for the state of Virginia indicating a tighter market at the state level than nationally.[6]

While this ratio is unavailable for geographies below the state level, we can approximate it by looking at the ratio of unemployment per job postings, where a ratio of 1.0 would indicate one unemployed person per job posting. In general, this ratio tends to be higher than the unemployment per openings ratio. Because not every job posting represents a single opening—unfilled openings may be reposted, or postings may be placed for future openings or as a means of testing market demand—there are often more job postings than job openings. However, the two metrics tend to follow the same trend over time. The unemployment per postings ratio for Northern Virginia, as of October 2022, was 0.8, compared to 1.0 for Virginia, and 1.4 for the United States (*Figure 7*). This suggests that the unemployment per openings ratio for our region is likely about the same as across Virginia if not slightly lower.

Figure 7: Ratio of Unemployed per Job Posting in NOVA Region
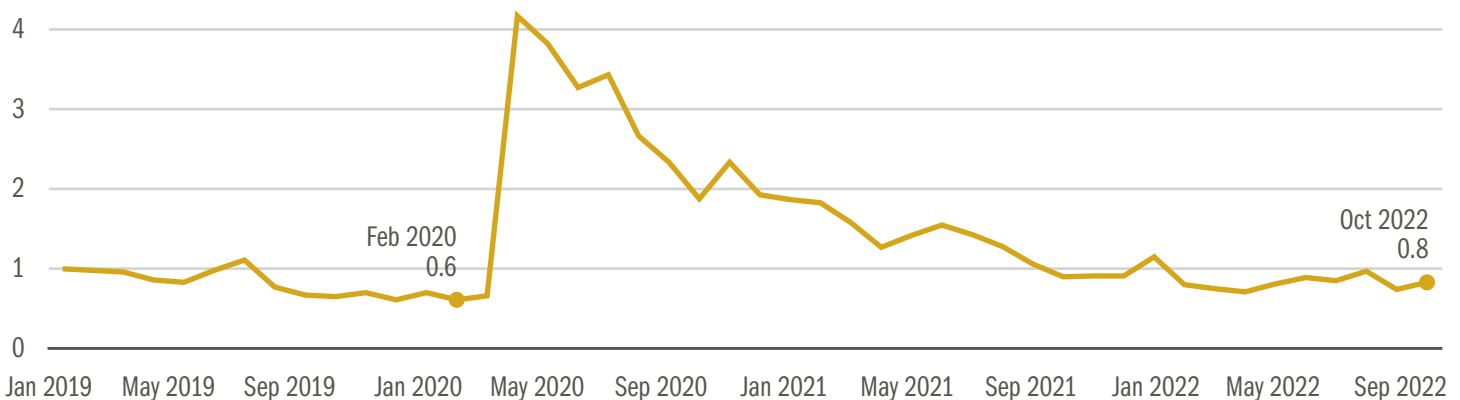
Sources: U.S. Bureau of Labor Statistics, "Unemployment by county, not seasonally adjusted," *Local Area Unemployment Statistics,* accessed December 12, 2022, www.bls.gov/lau/data.htm; Lightcast™ Analyst, 2022.4 release.

The three main changes in hiring and recruitment that businesses said are likely to become increasingly common over the next few years are an emphasis on diversity, equity, and inclusion (also ranked number one in last year's survey); the use of remote hiring methods; and the number and types of jobs requiring technology skills (*Figure 8*). The only two items where a double-digit share of businesses predicted a decline were the use of part-time/contract/temporary workers, and the consideration of candidates from other regions for fully remote positions.

Word of mouth or employee referrals are by far the most common source Northern Virginia businesses use to recruit new employees (92%), although online job boards, internal hiring, and social media/online advertising are also used by a majority of businesses. Meanwhile, work-based learning programs and methods are utilized infrequently, with only 40% of businesses reporting that they use internships for recruitment; 15% report using apprenticeships and 18% report using other work-based learning programs (*Figure 9a*). A similarly low percentage of businesses reported utilizing apprenticeships for recruitment in last year's Workforce Index (13%). Despite requiring additional resources, work-based learning models can typically offer greater opportunities to recruit candidates who might not have been considered for a position otherwise due to a lack of formal credentials or direct industry experience.[7] Around a third of businesses reported that candidates recruited from apprenticeships or other work-based learning programs very often or nearly always get hired (*Figure 9b*). This is higher even than the share of businesses reporting similar success with external recruiting firms or direct recruitment from colleges and universities.

Figure 8: Changes and Trends in Hiring

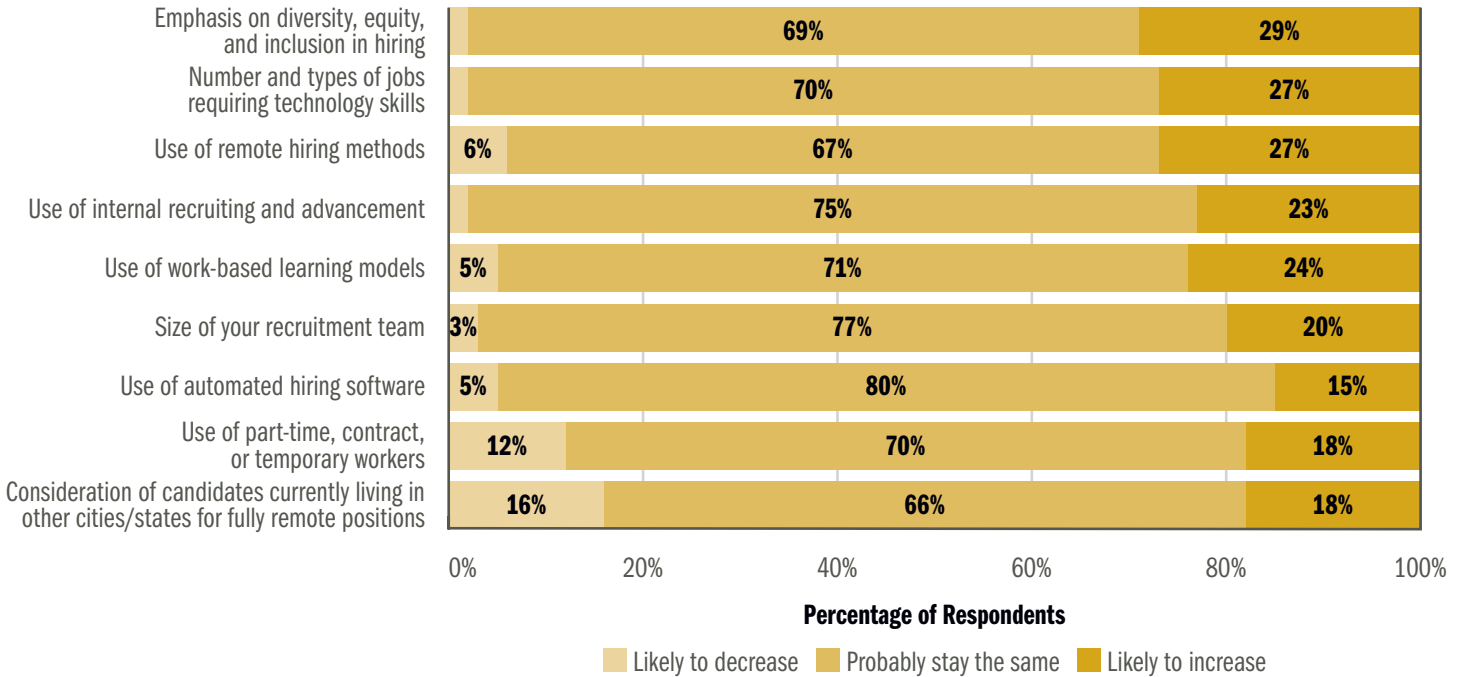**In the next 1-3 years, how likely is each of the following possible changes in your hiring or recruitment?**

Category	Likely to decrease	Probably stay the same	Likely to increase
Emphasis on diversity, equity, and inclusion in hiring		69%	29%
Number and types of jobs requiring technology skills		70%	27%
Use of remote hiring methods	6%	67%	27%
Use of internal recruiting and advancement		75%	23%
Use of work-based learning models	5%	71%	24%
Size of your recruitment team	3%	77%	20%
Use of automated hiring software	5%	80%	15%
Use of part-time, contract, or temporary workers	12%	70%	18%
Consideration of candidates currently living in other cities/states for fully remote positions	16%	66%	18%

Percentage of Respondents

Legend: Likely to decrease ▪ Probably stay the same ▪ Likely to increase

Figure 9a: Hiring Source Usage

Does your business use any of these sources to recruit talent?

Source	Percentage
Word of mouth/employee referral	92%
Online job boards	75%
Internal hiring/advancement	69%
Social media or online advertising	64%
Company/business job board	49%
Internships	40%
Direct college/university recruitment	34%
External recruiting firms	33%
Industry association/non-profit/community partnerships	31%
Staffing agencies	22%
Traditional media advertising	19%
Other work-based learning programs	18%
Apprenticeships	15%
Non-traditional training organizations	5%

Percentage of Respondents

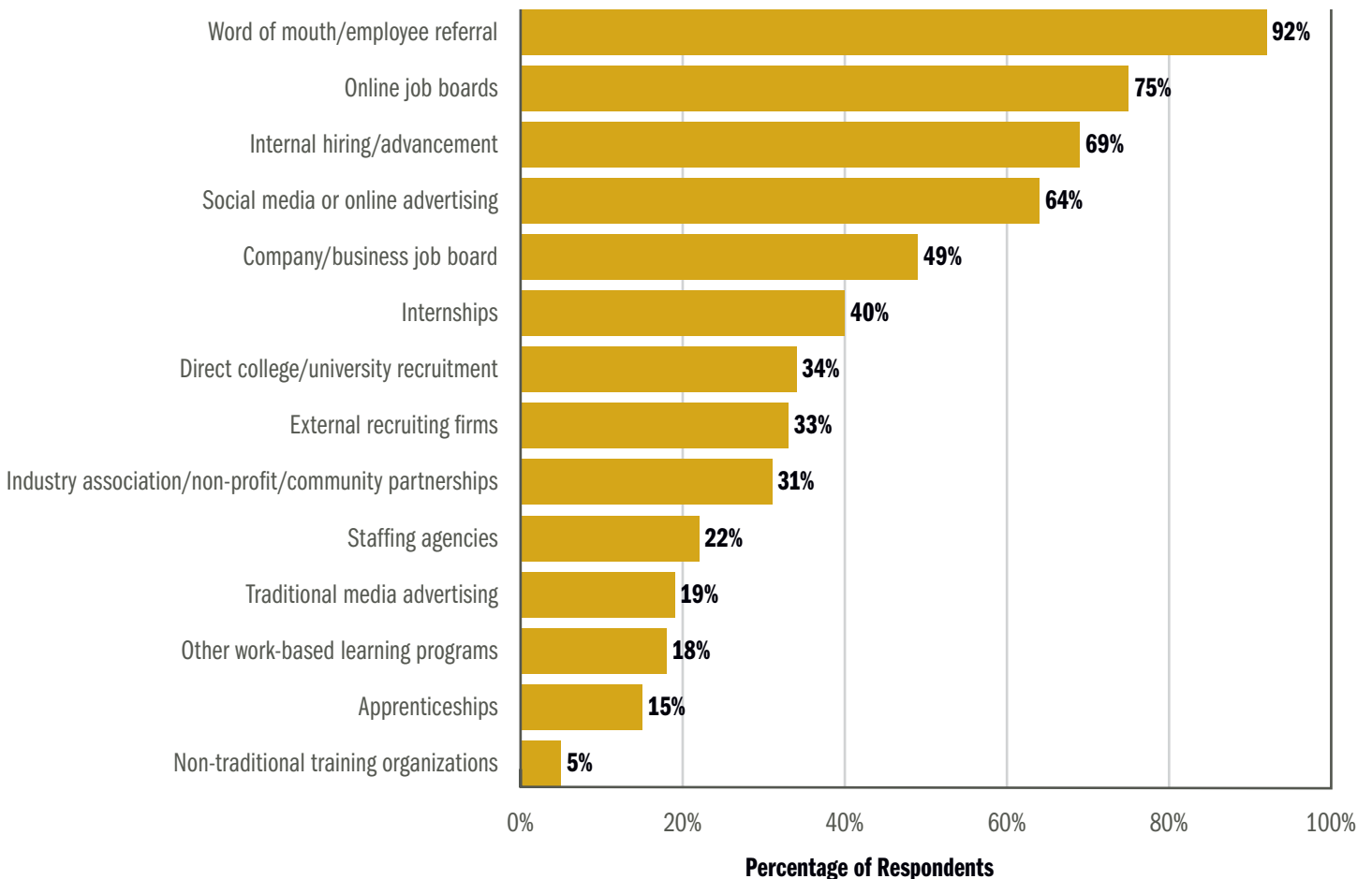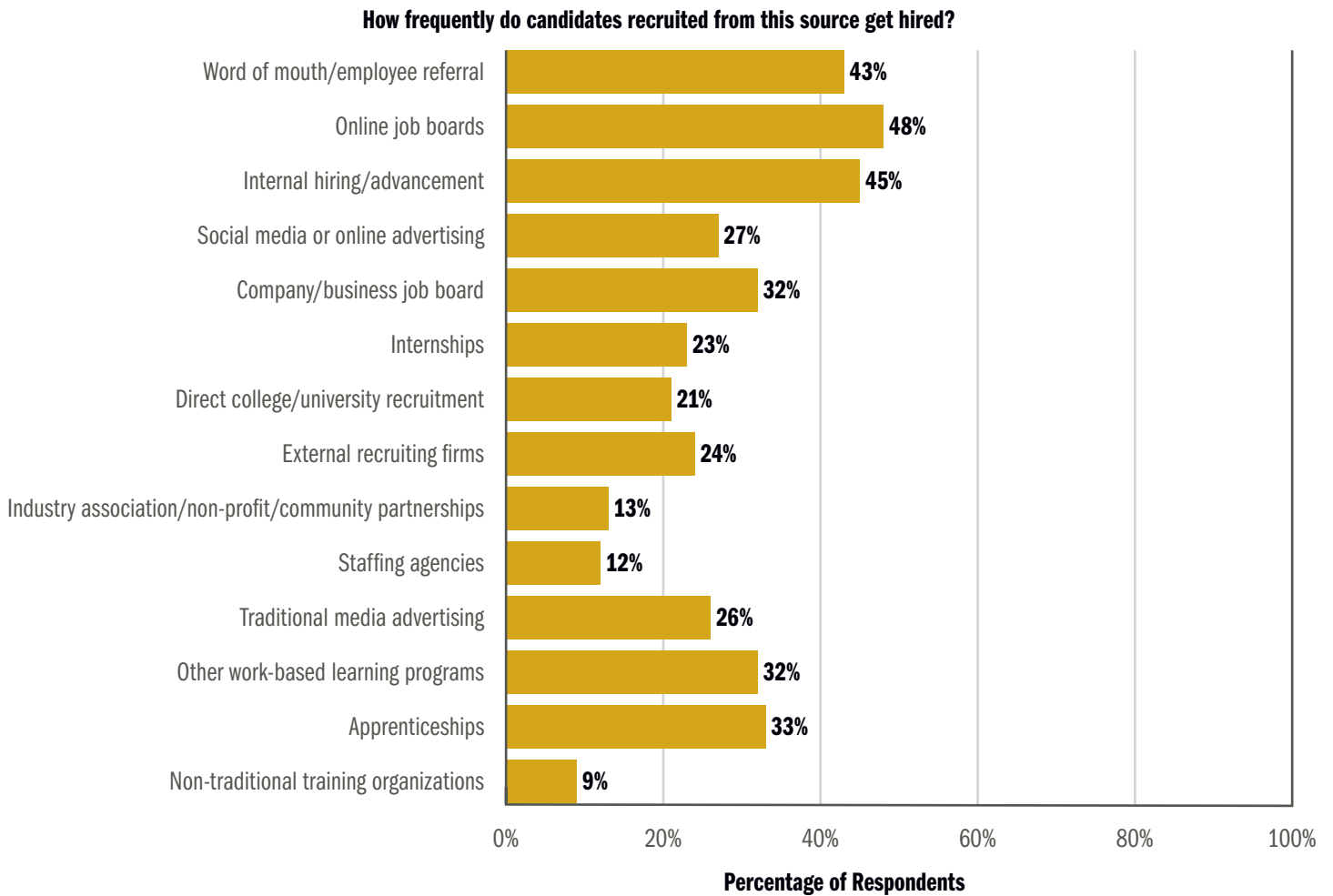## Figure 9b: Candidates Very Often or Nearly Always Hired from Source

How frequently do candidates recruited from this source get hired?

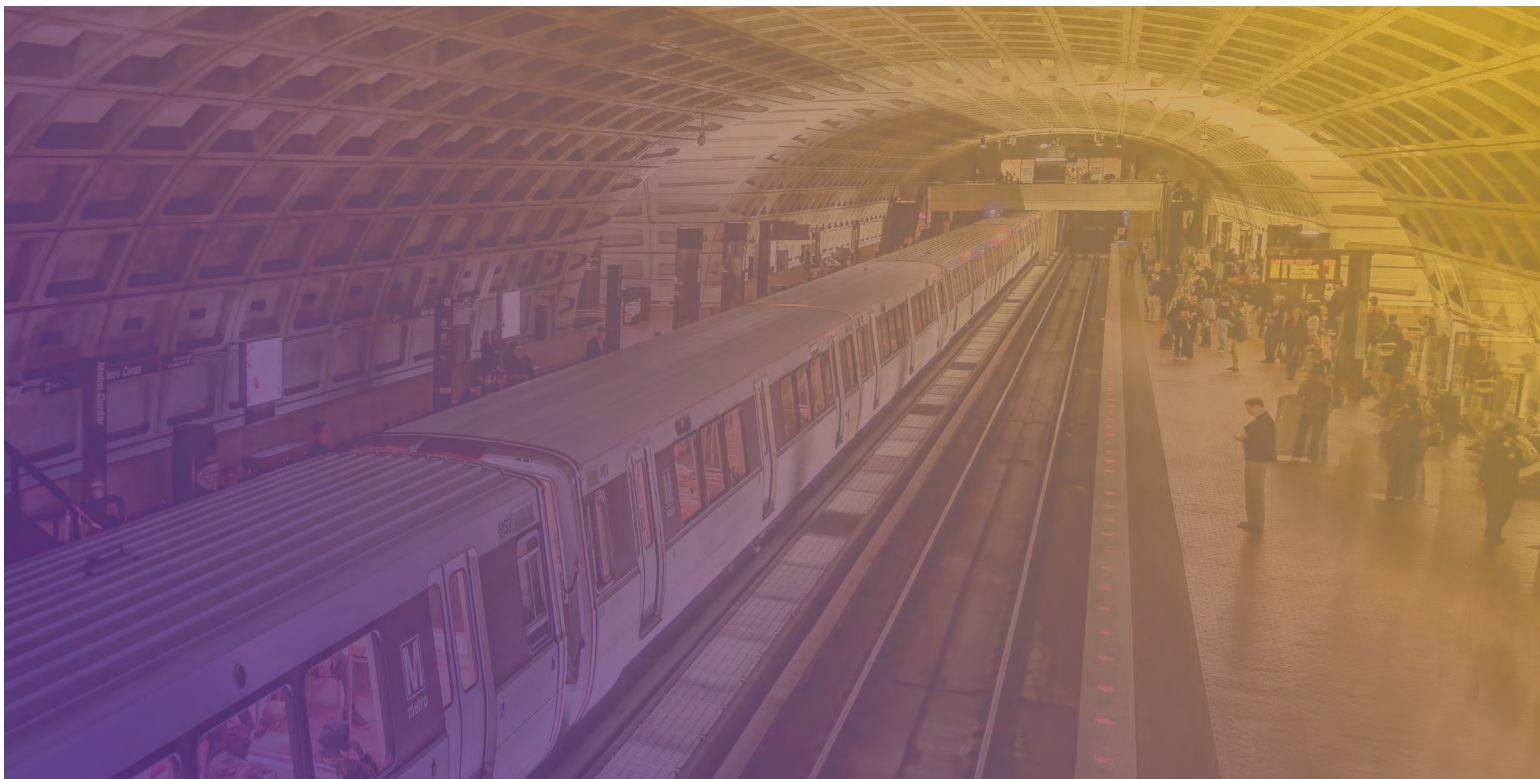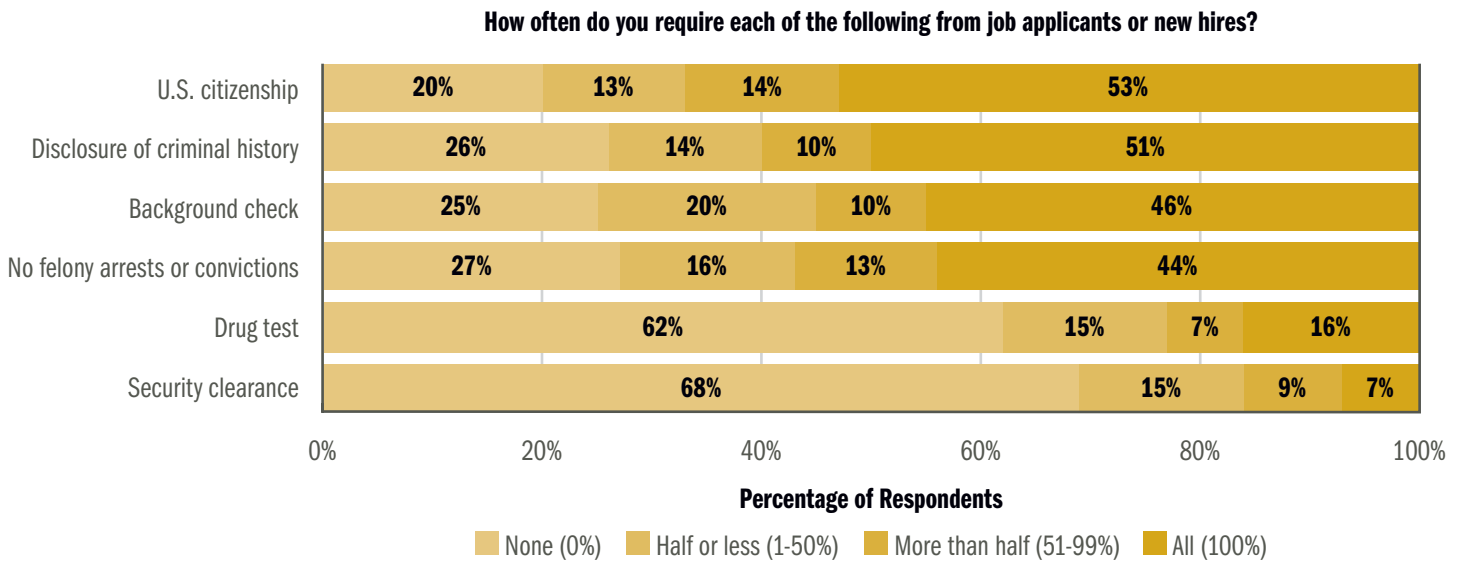| Source	Percentage
Word of mouth/employee referral	43%
Online job boards	48%
Internal hiring/advancement	45%
Social media or online advertising	27%
Company/business job board	32%
Internships	23%
Direct college/university recruitment	21%
External recruiting firms	24%
Industry association/non-profit/community partnerships	13%
Staffing agencies	12%
Traditional media advertising	26%
Other work-based learning programs	32%
Apprenticeships	33%
Non-traditional training organizations	9%

Percentage of Respondents

Just under half of businesses reported employing at least one intern in the last year (*Figure 10*). Of course, small businesses greatly outnumber large businesses, and small businesses (particularly those employing between five and nine people) are less likely to have employed any interns. In fact, less than 1% of businesses with more than 500 employees had zero interns, compared to about half of all other businesses. This highlights the fact that, while internships, apprenticeships, and work-based learning methods can certainly be beneficial, some smaller businesses will likely require supplemental resources and support to implement them. That said, around a quarter of businesses anticipate increasing their use of work-based learning models over the next few years (*Figure 8*).

Figure 10: Recent Internship Employment

How many interns has your business employed over the past 12 months?

	Percentage
None	51%
1-5	41%
6-10	5%
11-20	1%
Over 20	3%

Percentage of Respondents
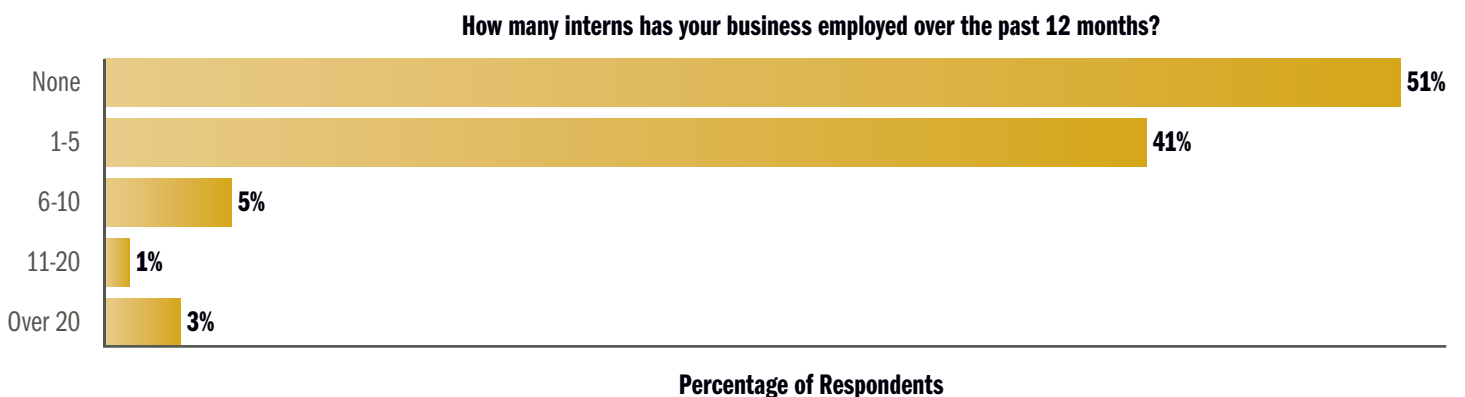
Most Northern Virginia businesses require background checks and U.S. citizenship of at least some employees. This is likely due, in part, to the high prevalence of federal and government contracting jobs in the region (61% of businesses identified as the latter). Similarly, around 60% of businesses require most or all candidates to disclose their criminal history during hiring, and 57% require most or all candidates to be free of felony arrests or convictions. While this may also be explained by the prevalence of government jobs in the region, shares among businesses who are not government contractors were only slightly lower (56% and 54%, respectively). Drug tests are far less common, with only 38% of businesses requiring them of any employees. Surprisingly, however, over two-third of businesses indicated that they do not require any of their employees to have a security clearance (*Figure 11*).

Figure 11: Hiring Requirements

How often do you require each of the following from job applicants or new hires?

	None (0%)	Half or less (1-50%)	More than half (51-99%)	All (100%)
U.S. citizenship	20%	13%	14%	53%
Disclosure of criminal history	26%	14%	10%	51%
Background check	25%	20%	10%	46%
No felony arrests or convictions	27%	16%	13%	44%
Drug test	62%	15%	7%	16%
Security clearance	68%	15%	9%	7%

Percentage of Respondents

■ None (0%)   ■ Half or less (1-50%)   ■ More than half (51-99%)   ■ All (100%)

RETENTION AND REMOTE WORK

Similar to reported changes in overall paid employment, a majority of Northern Virginia businesses indicated that the number of employee resignations largely remained the same as compared to the previous year (55%). Even so, nearly twice the percentage of businesses reported an increase in resignations compared to the previous year than reported a decrease (30% vs. 16%) reflecting the elevated rate of resignations at a national and state level popularly described as the "Great Resignation" (*Figure 12*). While these increases have been attributed to a variety of factors, especially the flexibility that a tight labor market offers workers to change jobs due to dissatisfaction or a desire for higher pay, the Bureau of Labor Statistics finds that quit rates have risen more quickly than might be explained solely by labor market tightening.[8]

Among other structural changes, the pandemic-related shift towards greater remote work is likely part of this story. A 2021 survey by financial services firm Bankrate found that workplace flexibility was the primary motivation provided by workers looking to resign, with over half specifically indicating a desire for remote work or adjustable working hours.[9]

Figure 12: Resignations

Compared with the previous year, employee resignations in the past 12 months have been:

Percentage of Respondents
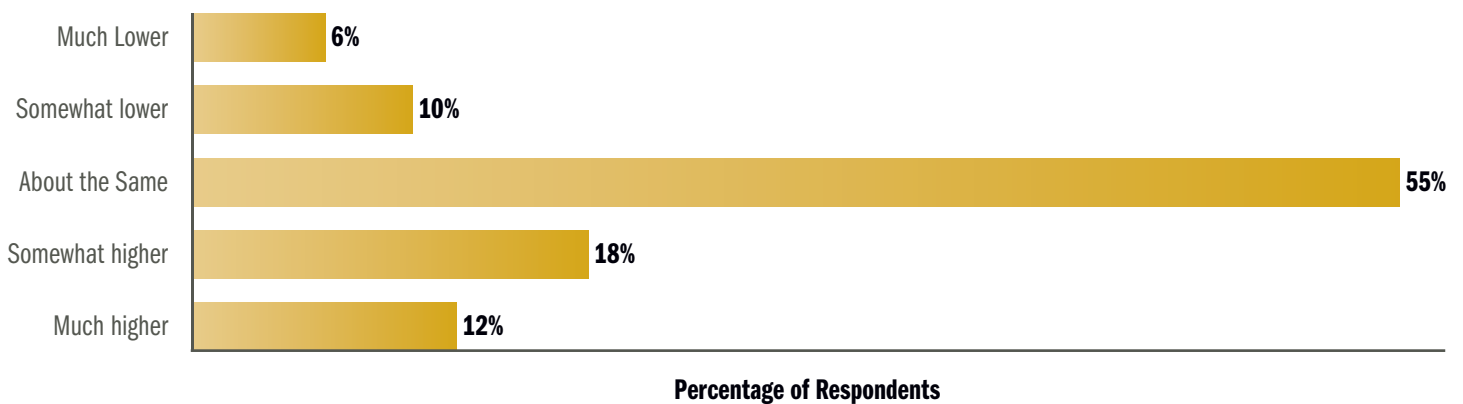
The demand for remote work is even more pronounced in Northern Virginia. This was certainly reflected in survey responses: a third of those respondents that provided additional information in response to an open-ended question at the end of the survey specifically mentioned remote work, often in the context of the challenge that demand for remote work creates when recruiting for jobs that cannot logistically be done remotely (e.g., construction or food service).

In response, most businesses in the region increased either the share of their workforce that is eligible for remote work (70%) or the number of telework hours employees are eligible for per week (67%). A smaller share expanded the geographic area in which remote workers may reside (*Figure 13*).

Likewise, the share of jobs posted across the region each month that mention some form of remote work has steadily increased since the start of the pandemic. Although the rates at which these postings have increased regionally has been largely consistent with rates across the country, Northern Virginia and the Washington, D.C. MSA saw a significant spike during the late summer of 2022 (*Figure 14*).

Figure 13: Changes to Remote Work Policies

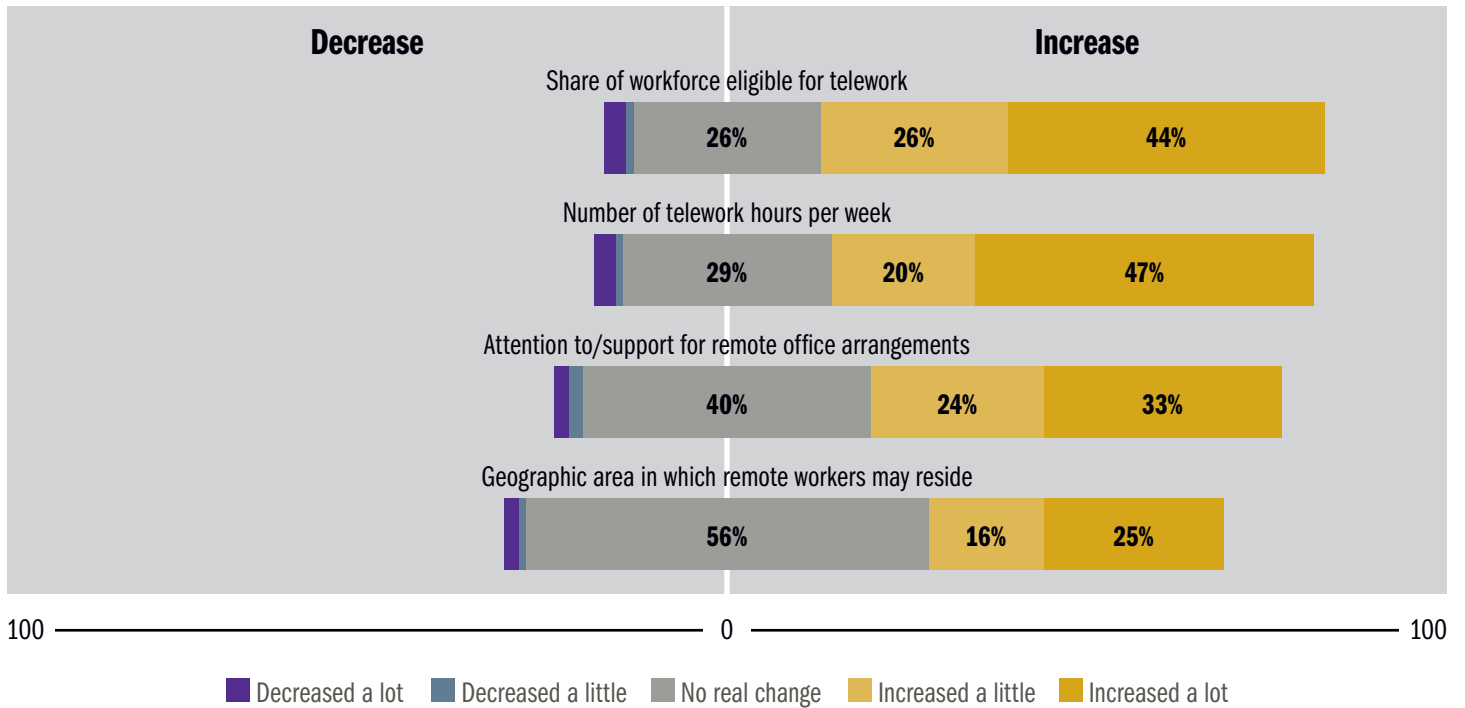**How have the following aspects of your business's remote work/telework policy changed since early 2020?**

Decrease | Increase

Share of workforce eligible for telework
26% | 26% | 44%

Number of telework hours per week
29% | 20% | 47%

Attention to/support for remote office arrangements
40% | 24% | 33%

Geographic area in which remote workers may reside
56% | 16% | 25%

100 — 0 — 100

■ Decreased a lot ■ Decreased a little ■ No real change ■ Increased a little ■ Increased a lot

Figure 14: Percentage Point Change in Remote Job Posting Share from 2019 Average

■ Northern Virginia ■ Washington, D.C. MSA ■ United States ■ Top 10 MSAs
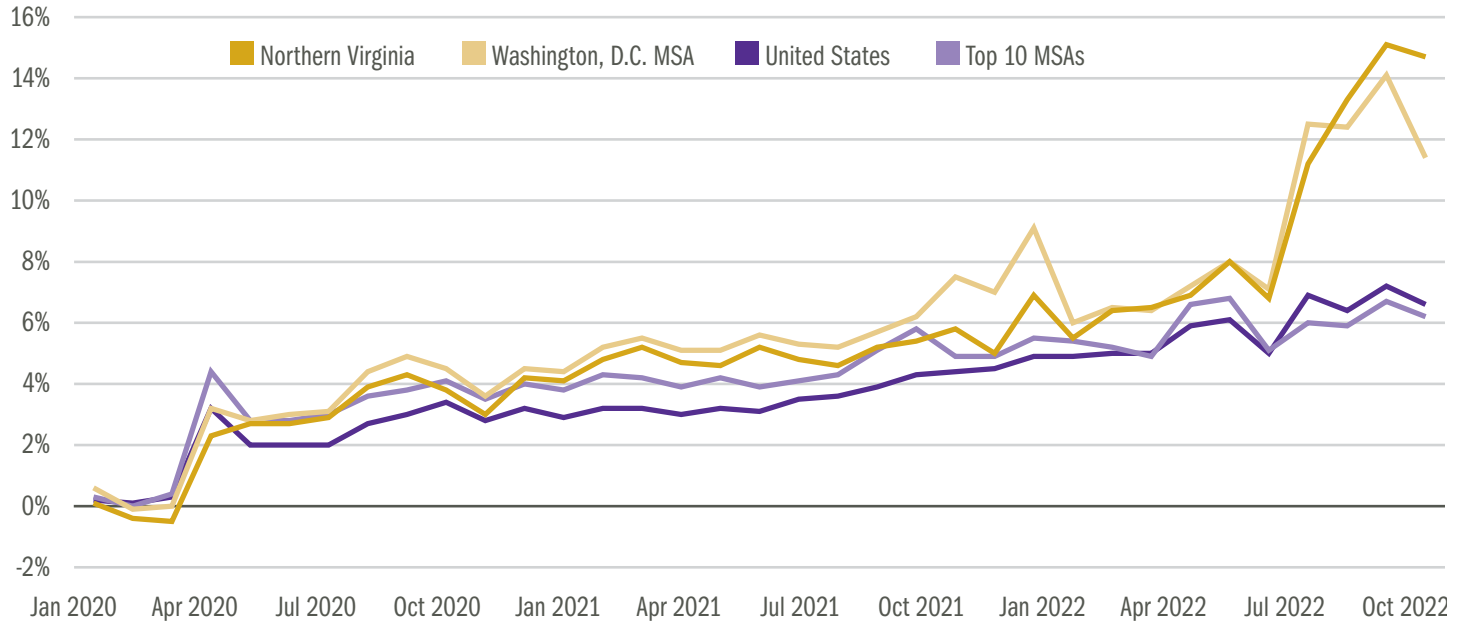
Source: Lightcast™ Analyst, 2022.4 release.

Despite signs that businesses in the region are increasing their flexibility to meet the demand for remote work options, just under a third (30%) reported that none of their employees are eligible for remote work. At the same time, over a third (37%) of businesses make some telework options available to their entire workforce (i.e., no employees are entirely ineligible) and 13% reported that over half of their workforce were eligible to work fully remote. Initial analysis suggests that, in industries where remote work is more feasible (e.g., financial and intellectual services), Northern Virginia businesses where a majority of the workforce is only eligible to work less than half of their time remotely reported, on average, significantly greater challenges hiring over the past 12 months than those businesses where a majority of the workforce is able to work remotely more than half the time.

In keeping with this theme, telework and remote work options were the benefits most likely to have been enhanced by businesses in response to hiring challenges post-pandemic (*Figure 15*). Initial analysis also suggests that those Northern Virginia businesses that increased the share of their workforce eligible for remote work saw, on average, significantly fewer resignations over the last 12 months than businesses that decreased eligibility.

Flexible scheduling was the second-most likely benefit to have been enhanced (by 40% of businesses). However, other flexibility-related benefits such as paid family leave or predictable scheduling for hourly workers (where applicable) were less likely to have been enhanced than compensatory benefits like bonuses or health care. Most businesses do not offer housing assistance, legal consultation services, or employee ownership options.
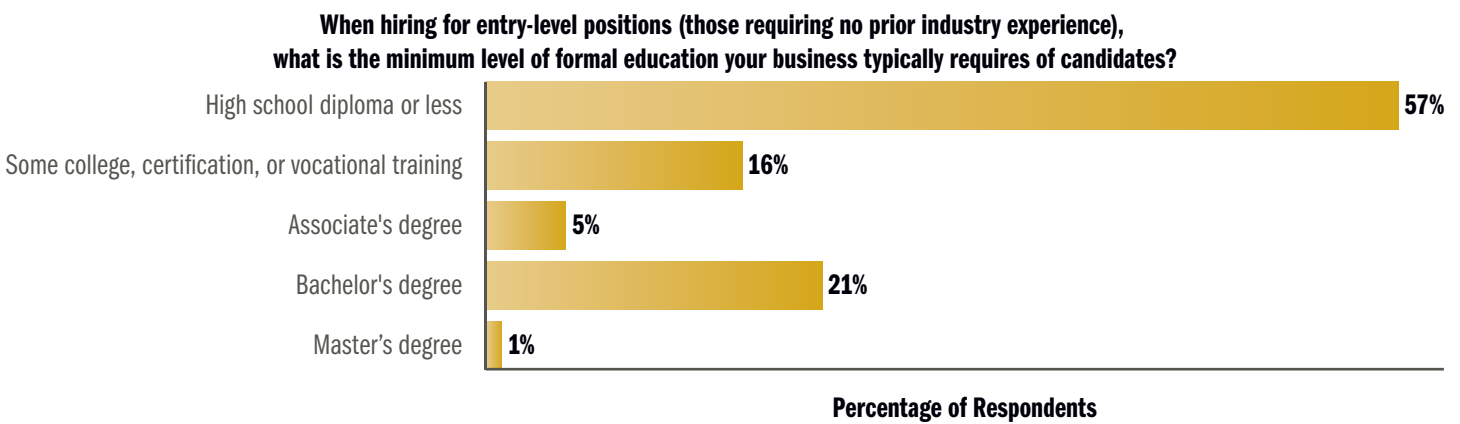
Figure 15: Changes to Employee Benefits

In response to worker shortages, COVID-19 restrictions, or other factors, how have you changed your employee benefits package?

Benefit	Reduced	Stayed the same	Enhanced
Telework/remote work options	3%	43%	54%
Flexible scheduling for salaried workers		60%	40%
Performance-based bonuses or other incentives		71%	28%
In-office perks or activities		74%	24%
Healthcare benefits		81%	18%
Paid vacation and sick leave		82%	17%
Paid parental/family leave		86%	13%
Predictable scheduling for hourly workers		82%	16%
Matching retirement contributions		83%	15%
Housing assistance		91%	9%
Legal consultation services		93%	6%
Employee ownership options		96%	3%

Percentage of Respondents

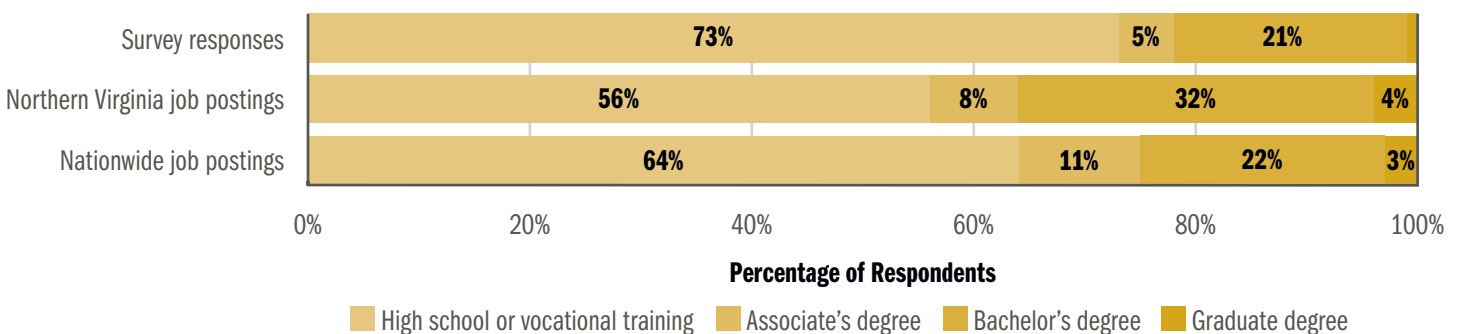# EDUCATION AND PROFESSIONAL DEVELOPMENT

Another structural change to the labor market that may predate the pandemic, but that was certainly accelerated by it, is an increased willingness on the part of some employers—including Alphabet, Delta, IBM, the State of Maryland, and even the federal government—to reconsider degree requirements and instead focus on skills-based hiring for certain positions.[10, 11] The majority of businesses in this year's Workforce Index (57%) indicated that they only require a high school diploma or less for entry-level positions (defined as those that require no prior industry experience). A little over 20% require a bachelor's or above, while about the same share require some college (but no degree), a certification, vocational training, or an associate's degree (*Figure 16*). This distribution is relatively similar to last year's survey, although responses in 2022 are less weighted towards bachelor's degrees and more towards a high school diploma. This may indeed reflect a larger shift towards lower education requirements among businesses in the region. However, professional services businesses that typically require higher levels of education were also overrepresented in last year's survey, which may account for this shift.

Figure 16: Minimum Education Required, Entry-Level Positions

When hiring for entry-level positions (those requiring no prior industry experience), what is the minimum level of formal education your business typically requires of candidates?

Education Level	Percentage
High school diploma or less	57%
Some college, certification, or vocational training	16%
Associate's degree	5%
Bachelor's degree	21%
Master's degree	1%

Percentage of Respondents

Regardless, this differs significantly from the minimum level of education typically required in job postings for entry-level jobs. A bachelor's degree was required among 1.5 times the share of entry-level job postings from the last 12 months than the share of businesses reporting the same requirement for their entry-level positions in this survey (*Figure 17*). Of course, it is important to keep in mind that Lightcast (originally Emsi and Burning Glass Technologies), whose Analyst tool aggregates job posting data across thousands of online job boards, is unable to determine minimum education requirements for around 40% of regional postings. It is possible that most of these unspecified postings would require a high school diploma or less. It may also be the case that businesses, when asked to think of educational credentials typically required for entry-level positions, think primarily of what is required for their "lowest-skilled" positions, rather than across the majority of those at the entry-level, regardless of skill level.

Figure 17: Minimum Required Education in Survey Responses vs. Entry-Level Job Postings

	High school or vocational training	Associate's degree	Bachelor's degree	Graduate degree
Survey responses	73%	5%	21%	
Northern Virginia job postings	56%	8%	32%	4%
Nationwide job postings	64%	11%	22%	3%

Percentage of Respondents

Source: Lightcast™ Analyst, 2022.4 release.

Note: Due to data source limitations, entry-level job postings are defined here as those requiring 0-1 years of experience.

Over half of businesses in the region see formal education as not at all/somewhat important when considering candidates for hire (*Figure 18a*). However, nearly all these businesses report requiring just a high school diploma or, at the very least, some level of higher education less than a bachelor's degree. Among businesses that consider formal education very important or essential in hiring, most require at least a bachelor's degree and are less likely to require some other college credential for entry-level positions (*Figure 18b*). These results suggest that, regardless of a nationwide trend towards more skills-based hiring, formal education—specifically, a bachelor's degree or above—persists as a core factor in hiring for the region. Given Northern Virginia's high levels of educational attainment—64% of residents aged 25 or older have a bachelor's degree or higher, compared to 37% nationally—this is not surprising.[12]

Figure 18a: Importance of Education in Hiring

When making hiring decisions, how important is a candidate's formal level of education or whether they meet certain degree requirements?

Response	Percentage
Not at all important	16%
Somewhat important	37%
Important	22%
Very important	15%
Essential	10%

Percentage of Respondents
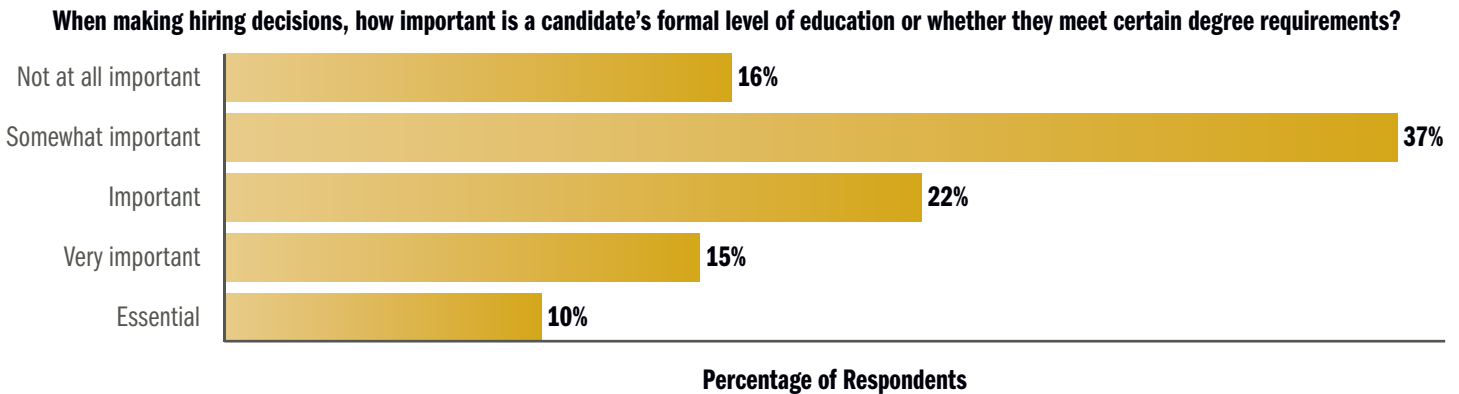
Figure 18b: Importance of Education by Minimum Level Required for Entry-Level

	High school diploma or less	Some college, certification, or associate's degree	Bachelor's degree	Master's degree
Not at all important	100%			
Somewhat important	68%	26%	6%	
Important	44%	30%	26%	
Very important	27%	24%	47%	
Essential	29%	13%	51%	7%

Percentage of Respondents

High school diploma or less ▪ Some college, certification, or associate's degree ▪ Bachelor's degree ▪ Master's degree
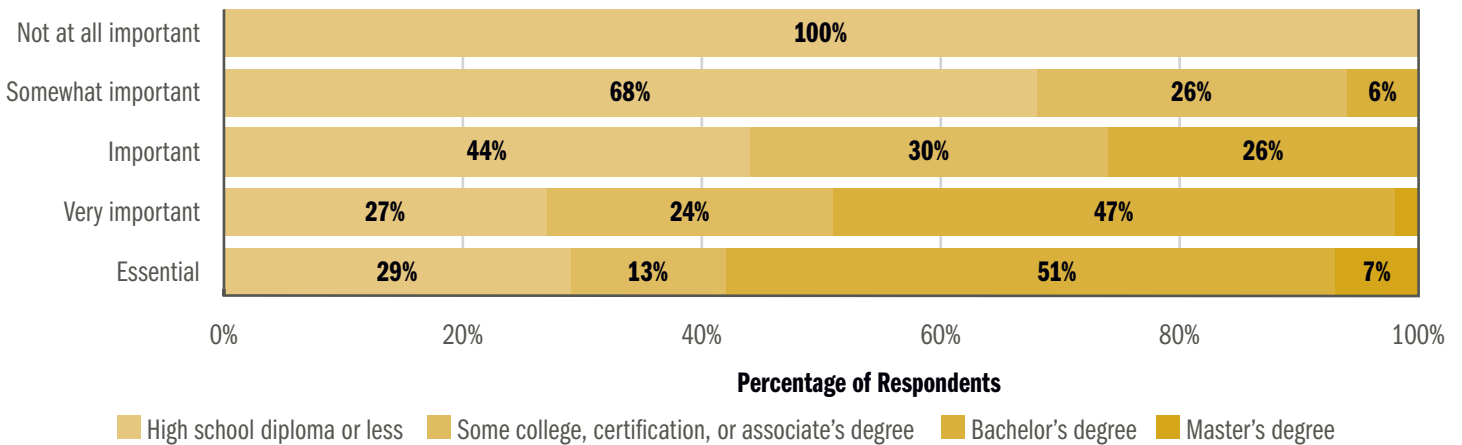
This conclusion is further reinforced by the fact that most businesses in Northern Virginia (67%) are only sometimes or rarely willing to accept professional experience equivalent to a degree or credential; nearly one-fifth are never willing to accept equivalent experience (*Figure 19*).

In terms of professional development and training benefits offered by businesses themselves, in-house training is the most commonly offered (*Figure 20a*) as well as the most frequently utilized among eligible employees (*Figure 20b*). By contrast, tuition reimbursement is offered by over half of businesses, but only 19% of businesses report that more than half of employees utilize the benefit. In fact, those professional development benefits with the highest rates of utilization are largely training offerings (offered in-house, contracted, or on-demand/web-based) rather than benefits related to pursuing continuing education (i.e., tuition reimbursement or flexible schedules). This reflects a 2020-2021 Strada Education/Gallup survey of over 15,000 individuals nationwide, which found that the shares of respondents likely to enroll in employer-provided training, online (non-degree) learning, or an apprenticeship/internship in the next year were higher than the shares of respondents likely to enroll in some form of formal education.[13]

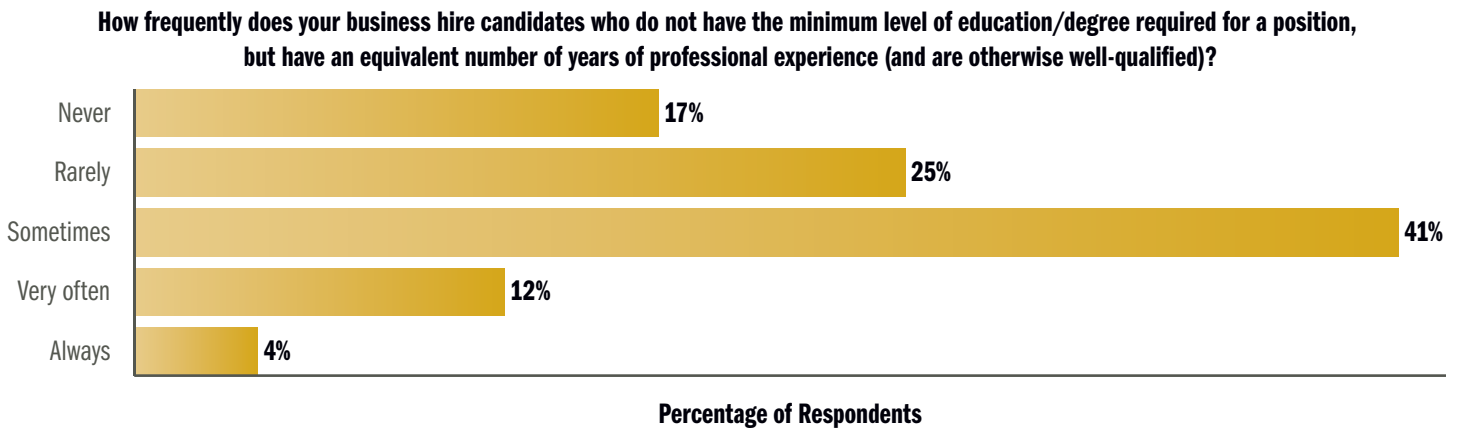# Figure 19: Willingness to Accept Equivalent Experience

How frequently does your business hire candidates who do not have the minimum level of education/degree required for a position, but have an equivalent number of years of professional experience (and are otherwise well-qualified)?

Response	Percentage
Never	17%
Rarely	25%
Sometimes	41%
Very often	12%
Always	4%

Percentage of Respondents

Figure 20a: Professional Development Offerings

Do you offer the following types of professional development or training benefits for existing employees at your business?

Benefit	Percentage
In-house training performed by subject-matter experts or a dedicated development team	72%
Flexible schedules for continuing education	63%
Tuition reimbursement	52%
On-demand/web-based learning platforms and services	51%
Contracted training offered through a private vendor	44%
Formal mentoring process	39%
Paid sabbatical or professional development leave	15%

Percentage of Respondents

Figure 20b: Majority of Eligible Employees Using Benefits

Benefit	Percentage
In-house training performed by subject-matter experts or a dedicated development team	57%
Flexible schedules for continuing education	27%
Tuition reimbursement	19%
On-demand/web-based learning platforms and services	38%
Contracted training offered through a private vendor	46%
Formal mentoring process	29%
Paid sabbatical or professional development leave	37%

Percentage of Respondents

CONCLUSION

Uncertainty surrounding the economic climate, which was noted in the *2021 Northern Virginia Workforce Index Report,* continued into 2022. However, while last year's uncertainty was met with optimism brought on by a "return to normal," strong job market, and further economic recovery, the mood among businesses in Northern Virginia in 2022 was more mixed.

Ongoing inflation, slowing job growth, and continued economic uncertainty afflicted businesses nationwide during 2022. Although Northern Virginia tends to weather recessions more easily than other regions due to its reliance on the federal government and strong professional services sector, businesses in our area were impacted by many of these same challenges. This includes continued difficulty hiring, due predominantly to challenges getting candidates in the door. An incredibly tight labor market also continues to push labor costs higher for businesses. As a result, most businesses indicate that employment levels have remained the same over the past year and anticipate that they will continue to. Despite these challenges, some takeaways from last year's report remain true. In general, businesses in Northern Virginia continue to rely on traditional modes of hiring and recruitment such as online job boards and word-of-mouth recruitment. Formal education, particularly at the bachelor's degree and above, also persists as a key factor in hiring.

Skills-based hiring, consideration of non-degree credentials/training, and work-based learning all offer the means of expanding employer access to workers who are often overlooked by traditional methods, which is particularly important given an increasing focus on diversity, equity, and inclusion in hiring.[14, 15] Still, these opportunities remain underutilized by businesses in Northern Virginia, even though workers tend to prefer non-degree credentials/training, and the success rate of hires resulting from work-based learning and apprenticeships is as high or higher than some more traditional recruitment methods. There are indications that at least some employers anticipate increasing the use of these methods in hiring and professional development, however. If the labor market remains just as tight over the coming year, even more businesses will likely need to continue implementing new and creative methods of hiring and recruitment, as well as relaxing other workforce requirements and enhancing additional benefits—particularly telework, where possible—to continue attracting skilled talent.

The improvements made to this year's survey will provide us with an even greater ability to identify and track these trends, whatever they may be. With these improvements, and the ongoing support of our partners, we hope the *Index* will continue to serve as a critical annual resource for economic and workforce development decision-making in the region well into the future.

APPENDIX: SURVEY METHOD & DATA

This appendix includes a discussion of the general methodology for the *2022 Northern Virginia Workforce Index Survey,* conducted by the Center for Survey Research (CSR) at the University of Virginia on behalf of Northern Virginia Community College and the Northern Virginia Chamber of Commerce.

Sampling: To improve the representation of different types and sizes of businesses, the survey sample was stratified based on two factors: industry and size. NAICS codes were grouped into five industry categories and businesses were grouped into five size categories based on number of paid employees (see *Table 1*). Businesses with four or fewer employees and businesses with an unknown number of employees were not sampled.

The sample counts for each grouping were based on the known population in each sample stratum using power allocation and were adjusted for expected differences in response rates. The power allocation procedure sampled businesses in each industry-size category according to the square root of its category's population size, based on a target of 2,015 businesses to be sampled. The response rate adjustment, based on CSR's prior experience with business surveys, adjusted sample sizes upwards for the smallest and largest size categories, as these businesses have had lower rates of response in prior business surveys.

Any business which met the stratification criteria and had a valid postal address was eligible. To further ensure the reliability and accuracy of the listings, lookup calling preceded data collection. Online lookups and/or lookup phone

calls were conducted for all cases to determine the correct contact person to complete the survey and to verify the business's address, along with the eligibility of the business to complete the survey.

Independently, in consultation with CSR, Northern Virginia Community College used a nonprobability approach to survey members of the Chamber of Commerce and other known businesses in Northern Virginia.

Data Collection: The survey launched on October 14, 2022, following the lookup phase, with the mailing of an advance letter one week before the questionnaire. The web survey launched simultaneously with instructions for accessing the web survey included in the paper questionnaire survey packet. Data collection was closed on December 9, 2022. Reminder calling began November 10, 2022 and continued until November 23, 2022.

Data Preparation: CSR carried out the data preparation for analysis, which required the labeling, cleaning, and merging of paper and online data across both the main, probability-based sample and the supplemental nonprobability sample. Responses from the Northern Virginia business sample were de-duplicated across the two modes of data collection to ensure only a single response per business was recorded. In instances when a business completed the questionnaire more than once, the first submission was accepted and subsequent entries were dropped from the data file. A comparison of the samples across modes was reviewed to make sure each survey was similarly administered. All data preparation were carried out using SPSS software (version 27). Further data aggregation and analysis were carried out by Northern Virginia Community College using R statistical software.

Weighting: As noted, the probability sampling design for the study included stratification across size and industry to increase variation within the final sample. Certain strata were sampled at a higher rate while other strata were sampled at a lower rate. In addition, each stratum responded at different rates. The probability and non-probability samples were combined for weighting purposes. The total weights combine base (stratification weights) and post-stratification weights. Each respondent received a weight inverse to its combined probability of (1) being selected into the sample and (2) responding; that is, for each stratum the total weight is simply the total stratum population divided by the total number of responses in the stratum. Analysis of weighted data was carried out using the *survey* and *survyr* R software packages.

Final Dispositions and Response Rates: In total, 191 individuals from the probability sample completed the survey; 101 of these surveys were completed via the web, and 91 were completed via mail. An additional 82 cases were out of sample, 313 had bad addresses, and another 84 cases refused to participate. Another four cases were confirmed to be eligible and opened the web survey but did not provide enough information to be counted as a valid response and two cases did not complete enough of the survey to determine eligibility. The remaining cases were categorized as some form of non-response. Following American Association for Public Opinion Research's (AAPOR) Response Rate 3 (RR3) calculation, the response rate for the probability sample was 36.6%. A response rate cannot be calculated for the non-probability sample.

Margin of Error: The margin of error for the probability-based responses is approximately ±8.6 percent at the 95 percent level of confidence. This means that if the survey was repeated with 100 different random samples, the results of the survey would be within 8.6 percentage points of the population (all businesses in Northern Virginia) mean in 95 out of those 100 iterations of the survey. Note that every question on the survey has its own margin of error. The overall calculation presented here is for a question answered by all respondents with a 50-50 response distribution. Margins of error would be larger for questions answered by smaller numbers of respondents or for subgroups in the data. On the other hand, questions with a lopsided response pattern (e.g., an 80-20 response pattern) and answered by all respondents will have a smaller margin of error. A response rate cannot be calculated for the non-probability sample.

This overview has been edited and condensed from the full sampling and methodology report prepared by Thomas M. Guterbock, Ph.D., Sean Johnson, and Adina Kugler at the University of Virginia Center for Survey Research. For the full report as well as a copy of the survey questionnaire, visit:

www.nvcc.edu/osi/labor-market/research-insights.html

ENDNOTES

1 Abha Bhattarai, "What's next for the Economy? 10 Charts That Show Where Things Stand.," *Washington Post* (Washington, D.C., December 29, 2022), accessed January 1, 2023, www.washingtonpost.com/business/2022/12/29/economy-2023-outlook-inflation-prices.

2 Northern Virginia Community College, *2021 Northern Virginia Workforce Index,* October 2021, novachamber.org/northern_virginia_workforce_index.

3 U.S. Census Bureau, "About the Data," *Business Trends and Outlook Survey,* last modified December 22, 2022, www.census.gov/hfp/btos/about.

4 U.S. Census Bureau, "Top 25 MSA," *Business Trends and Outlook Survey,* accessed January 12, 2023, www.census.gov/hfp/btos/data_downloads.

5 Arthak Adhikari and Tamara Mickle, "What is the unemployed people per job openings ratio? A 21-year case study into unemployment trends," *U.S. Bureau of Labor Statistics* (June 2022), www.bls.gov/opub/btn/volume-11/what-is-the-unemployed-people-per-job-openings-ratio-a-21-year-case-study-into-unemployment-trends.htm.

6 U.S. Bureau of Labor Statistics, "Number of unemployed persons per job opening by state, seasonally adjusted," J*ob Openings and Labor Turnover Survey,* accessed January 12, 2023, www.bls.gov/charts/state-job-openings-and-labor-turnover/unemployed-persons-per-job-opening-by-state.htm.

7 Gretchen Cheney, "Growing Equity and Diversity Through Apprenticeship: Business Perspectives," *JFF Center for Apprenticeship & Work-Based Learning* (September 3, 2019): 25-30, www.jff.org/resources/growing-equity-and-diversity-through-apprenticeship-business-perspectives.

8 Maury Gittleman, "The 'Great Resignation' in perspective," *Monthly Labor Review, U.S. Bureau of Labor Statistics,* (July 2022), doi.org/10.21916/mlr.2022.20.

9 Sarah Foster, "Survey: 55% Expecting To Search For A New Job Over The Next 12 Months," *Bankrate,* August 23, 2021, www.bankrate.com/personal-finance/job-seekers-survey-august-2021.

10 Joseph B. Fuller et al., *The Emerging Degree Reset: How the Shift to Skills-Based Hiring Holds the Keys to Growing the U.S. Workforce at a Time of Talent Shortage,* White Paper (Burning Glass Institute, February 2022), accessed January 12, 2023, www.hbs.edu/faculty/Pages/item.aspx?num=62030.

11 Austen Hufford, "Employers Rethink Need for College Degrees in Tight Labor Market," *Wall Street Journal,* November 26, 2022, sec. Economy, www.wsj.com/articles/employers-rethink-need-for-college-degrees-in-tight-labor-market-11669432133.

12 U.S. Census Bureau, "Educational Attainment for the Population 25 Years and Over," *2016-2020 American Community Survey 5-Year Estimates,* data.census.gov.

13 Strada Center for Education Consumer Insights, "Explore Public Viewpoint Data: COVID-19 Work and Education Survey," accessed January 3, 2023, cci.stradaeducation.org/ecs-2020.

14 Sergio Galeano and Katherine Townsend Kiernan, *Skills-Based Approaches for Finding Talent and Diversifying the Workforce: Six Lessons from Employers* (Atlanta: Federal Reserve Bank of Atlanta, March 2022), doi.org/10.29338/wc2022-03.

15 Ashley Edwards et al., *The Changing Face of Apprenticeships: New Opportunities for Employers and STARs* (Lightcast and Opportunity@Work, November 2022), lightcast.io/resources/research/the-changing-face-of-apprenticeships.

ACKNOWLEDGEMENTS

For more information about this project, or to be involved in the future of the Northern Virginia Workforce Index, contact Jennifer Williamson, Vice President of Workforce & Member Engagement at the Northern Virginia Chamber of Commerce: **jwilliamson@novachamber.org.**

For additional data and insights on labor market trends in Northern Virginia, visit www.nvcc.edu/lmi, or contact NOVA's labor market intelligence team at **novalmi@nvcc.edu.**