2023 Northern Virginia Workforce Index Survey

Report of Sampling and Methodology

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About the Survey

The *2023 Northern Virginia Workforce Index Survey* was conducted by the Center for Survey Research (CSR) at the University of Virginia's Weldon Cooper Center for Public Service on behalf of Northern Virginia Community College and the Northern Virginia Chamber of Commerce. The purpose of this annual survey of businesses is to assess current workforce and talent-related issues for employers in the Northern Virginia region. The survey was designed to be repeated annually. A total of 2,103 businesses in Northern Virginia were surveyed in 2023. The employee at each business location with knowledge about recruitment and hiring practices was asked to complete the questionnaire on behalf of the business.

This report includes a discussion of the general methodology and provides additional details on how the questionnaire was developed, how the sample was selected, and how the survey was administered.

Questionnaire Development

The 2023 questionnaire is very similar to the instrument used in 2022, with minimal edits to question wording. The survey includes questions about the respondent's role within the business and business location, examines their outlook on the economy and the future of the business, and gauges trends in hiring and recruitment, along with employment, training, and professional development initiatives at the business. Northern Virginia Community College provided final approval of the instrument. The questionnaire was offered in U.S. English only (see Appendix A for full questionnaire).

Sampling

The geographic area for the study population included all of Northern Virginia, which was defined as the nine Commonwealth jurisdictions closest to Washington D.C., including Arlington, Fairfax, Loudoun, and Prince William counties, as well as the independent cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park.

To support the representation of different types and sizes of businesses, the sample was stratified based on two factors: industry and size. NAICS codes were grouped into five industry categories: Raw Materials, Business Support, Financial/Intellectual Services, Sales/Personal Services, and Social Services/Well-Being. These groupings and the specific NAICS codes within these groupings are presented in Table 1. The five business size categories were: "Smaller" (five to nine employees), "Small" (10 to 19 employees), "Medium" (20 to 99 employees), "Large" (100 to 499 employees), and "Larger" (500 or more employees). Businesses in the smallest category (i.e., four or fewer employees) and businesses with an unknown number of employees were not sampled. The intersection of industry and size created the basis for the stratified sampling design, which contained 25 total strata. Table 2 summarizes the distribution of all Northern Virginia business across these strata.

Table 1. Industry Groupings Using First Two Digits of NAICS Codes

Raw Materials		Sales/Personal Services	
11	Retail Trade	44-45	Retail Trade
21	Arts, Entertainment & Recreation	71	Arts, Entertainment & Recreation
22	Accommodation & Food Services	72	Accommodation & Food Services
23	Construction	81	Other Services (except Public Administration)
Business Support		**Social Services/Well-Being**	
31-33	Manufacturing	61	Educational Services
42	Wholesale Trade	62	Healthcare & Social Assistance
48	Transporting & Warehousing	92	Public Administration
56	Admin, Support, Waste Management & Remediation Services		
Financial/Intellectual Services			
51	Information		
52	Finance & Insurance		
53	Real Estate, Rental & Leasing		
54	Professional, Scientific & Technical Services		
55	Management of Companies & Enterprises		

Table 2. Population Counts across Strata

	Employee Size 5 to 9	Employee Size 10 to 19	Employee Size 20 to 99	Employee Size 100 to 499	Employee Size 500+	Total
Raw Materials	986	620	546	97	23	2272
Business Support	1711	1005	862	252	125	3955
Financial/Intellectual Services	3789	2248	2348	708	314	9407
Sales/Personal Services	4011	2173	1306	197	60	7747
Social Services/Well Being	2871	904	604	127	84	4590
Total	13368	6950	5666	1381	606	27971

The sample counts for each grouping were based on the known population using power allocation and were adjusted for expected differences in response rates. The power allocation procedure sampled businesses in each industry-size stratum according to the square root of its category's population size, based on a target of 2,103 businesses to be sampled. The response rate adjustment, based on CSR's experience with the 2022 survey administration, adjusted sample sizes upwards for the largest size categories, as these businesses had lower rates of response in the prior survey cycle. Table 3 summarizes the sample counts.

Table 3. Sample Counts across Strata

	Employee Size 5 to 9	Employee Size 10 to 19	Employee Size 20 to 99	Employee Size 100 to 499	Employee Size 500+	Total
Raw Materials	89	63	71	24	10	257
Business Support	142	115	121	47	51	476
Financial/Intellectual Services	145	123	134	55	74	531
Sales/Personal Services	180	143	124	35	39	521
Social Services/Well Being	120	74	64	23	37	318
Total	676	518	514	184	211	2103

Any business which met the stratification criteria and had a valid postal address were eligible. Based on these specifications, the sample was procured from a third-party vendor, Dynata, Inc, an industry leader and re-seller of Dun & Bradstreet business listings. Listings include contact information (phone, email) for 'Top contact.' The list included the name and contact information for any Human Resources personnel based on specific titles where available.

The 2023 survey included a design experiment to assess the efficacy of using a noncontingent $2 bill among this study population. To that end, 1,050 of the 2,103 businesses in our sample were randomly selected to receive the $2 incentives and the remaining 1,053 did not receive an incentive.

To further ensure the reliability and accuracy of the listings, a sample verification process was conducted by CSR prior to data collection. For all cases, CSR conducted internet searches and made phone calls to verify eligibility for the study and update contact information, including identifying who at the business was best suited to complete the survey. CSR began the sample verification process on July 22, 2023. A total of 3,209 internet searches or phone calls were conducted before this process was completed on August 8, 2023. At the start of this process, just 226 businesses (10.7% of sample cases) included an email address as part of their contact information. At the conclusion of sample verification, 624 business contacts (29.7% of cases) included an email address. Additionally, this process identified 210 cases as out of sample, 12 cases refused to participate, and 4 cases were discovered to be duplicate listings of other sampled cases.

The employee who was most familiar with hiring and recruitment decisions was asked to complete the survey on behalf of the business. This person could fill out the questionnaire from a different location but would answer the survey questions with the listed location in mind.

Additionally, CSR hosted a non-probability instance of the survey so that businesses not sampled as part of the probability study could still participate. CSR shared an anonymous, reusable link for the non-probability survey, which Northern Virginia Community College and the Chamber of Commerce shared with their contacts, including members of the Chamber of Commerce and other known businesses in Northern Virginia. As with the stratified random sample, the non-probability sample excluded businesses without a Northern Virginia location. Two questions were added to the non-probability version of the questionnaire to identify employee size and industry groups to determine the sampling stratum. All other survey questions remained the same in both instances of the questionnaire. The non-probability results were collected to hear from businesses that were not selected for the probability sample but may have wanted to provide feedback to the Northern Virginia Chamber of Commerce.

Data Collection

The survey launched on August 22, 2023, with the mailing of an advance letter. The letter was followed by the first questionnaire packet, sent approximately one week later on August 28, 2023. The first questionnaire packet included a letter introducing the survey along with instructions for completing the survey online, as well as a paper questionnaire booklet and a postage-paid business reply envelope. As noted, half of the businesses were selected to receive a $2 unconditional incentive with the first questionnaire packet. Following the first questionnaire packet, businesses were sent a thank-you/reminder postcard, a second questionnaire packet, and a closeout postcard.

Shortly after the mailing of the first packet, CSR sent an email invitation, with direct link to the survey, for all cases for which an email was on file. These same businesses were sent additional email communications, including two reminder emails and one closeout email.

As an additional mode of contact to encourage participation, businesses were contacted by phone between September 15 to October 20, 2023. During these calls, eligibility for the study was verified, attempts were made to reach or identify the correct person to fill out the survey, and emails with the survey link were offered. A total of 115 businesses requested an emailed survey link after receiving a telephone call.

Data collection closed on November 1, 2023.

Table 4. Production Timeline

Task	Date
Mail advance letter	August 22, 2023
Mail first questionnaire packet (web referral)	August 28, 2023
Send invitation email	September 6, 2023
Mail thank-you/reminder postcard	September 7, 2023
Start of reminder calling	September 15, 2023
Send first reminder email	September 19, 2023
Mail second questionnaire (web referral)	September 25, 2023
Send second reminder email	October 3, 2023
Mail closeout postcard	October 4, 2023
Send closeout email	October 16, 2023
End of reminder calling	October 20, 2023
Close data collection	November 1, 2023

Response Rate

In total, 270 businesses in Northern Virginia participated in the survey, including 246 businesses from the probability sample via the web or mail (91.1% of the total) and 24 businesses from the non-probability sample on the web (8.9% of the total). Below is a description of the probability sample response rate. A response rate cannot be calculated for the non-probability sample.

Before a response rate for the probability sample could be determined, all records of contact attempts via mail, phone and email were compared, along with the completeness of responses received, to set a final disposition for each case.

In total, 246 businesses from the probability sample completed the survey; 130 of these surveys were completed via the web, and 116 were completed via mail. An additional 239 cases were out of sample/ineligible, 302 had bad addresses and could not be reached, and another 90 cases refused to participate. The remaining cases were categorized as some form of non-response (see Table 5 for a summary of final dispositions for all cases in the probability sample).

Table 5. Summary of final dispositions for all cases in the probability sample

AAPOR Code	AAPOR Disposition	Counts	Percent
1.10	Eligible - Complete	237	11.3%
1.20	Eligible - Complete, partial	9	0.4%
2.11	Eligible - Refusal (Opt-out or return of blank questionnaire)	90	4.3%
2.30	Eligible – Other (nothing ever returned)	861	40.9%
3.21	Unknown eligibility – Unreachable/screener not completed	486	23.1%
3.22	Unknown eligibility – Nothing ever returned	177	8.4%
4.10	Not eligible - Out of sample (did not qualify)	239	11.4%
4.81	Not eligible – Duplicate listing	4	0.2%
Total		2103	100%

A response rate was calculated using the final dispositions provided above. The American Association for Public Opinion Research's (AAPOR) Response Rate 4 (RR4) was calculated for this report. The RR4 calculation takes as the numerator the combined amount of completes and partial completions with sufficient data to be considered valid. This is divided by a denominator that includes total cases sampled minus (1) those that were out of sample and (2) those of unknown eligibility that are estimated to be out of sample (based on the observed proportion of ineligible cases among those of known eligibility, a factor known as e in the AAPOR RR4 formula). The estimated proportion of cases of unknown eligibility that were eligible, e, was 0.83125 and was used in this response rate calculation. Following AAPOR's RR4 calculation, the overall response rate for the probability sample was 14.1%.

When comparing response rates via AAPOR's RR4 calculation, the sample group of businesses that received no incentive had a response rate of 12.4% with a total of 116 responses, whereas the sampled businesses who received a $2 bill responded at a rate of 15.8% with 130 total responses (see Table 6_. This is a marginal increase in response by approximately 27%. Further, the difference response rate between those who received the $2 incentive and those who did not was found to be statistically significant at the 95% confidence interval. Evidence from our analysis thus suggests that including a $2 incentive to complete the questionnaire leads to a significant increase in response.

Table 6. Response Rates by Treatment

| Incentive Group	Number of Responses	Response Rate
No Incentive	116	12.37%
Received Incentive	130	15.80%
Total	246	14.1%

In addition to the overall increase in response from the sampled cases who received the $2 incentive, we also observed slight differences in rate of submission by mode between the two sample grounds. Overall, 53% of probability responses were received by web; 47% by paper. Businesses who received an incentive responded by web at a higher rate, with 54% of responses submitted online compared to 46% by paper. For businesses who did not receive an incentive, this differential was more narrow, with 51% completing by web and 49% by paper. This distinction in mode of completion is relevant as a web completion is more time and cost effective by cutting back on postage and data entry.

Table 7. Responses by Treatment across Modes

	Web		Paper		Total
	n	%	n	%	n
No Incentive	56	51.4%	53	48.6%	109
Received Incentive	74	54.0%	63	46.0%	137
Subtotal	130	52.8%	116	47.2%	246

When looking at the number of responses received each week from each sample group, there is a noticeable trend of not only the incentive group responding at a higher rate overall, but also that the incentive group's responses arriving earlier in the data collection period. Within the first three weeks of data collection, over half of the responses from the incentive group had been received.

Graph 1. Weekly Response County by Incentive Group
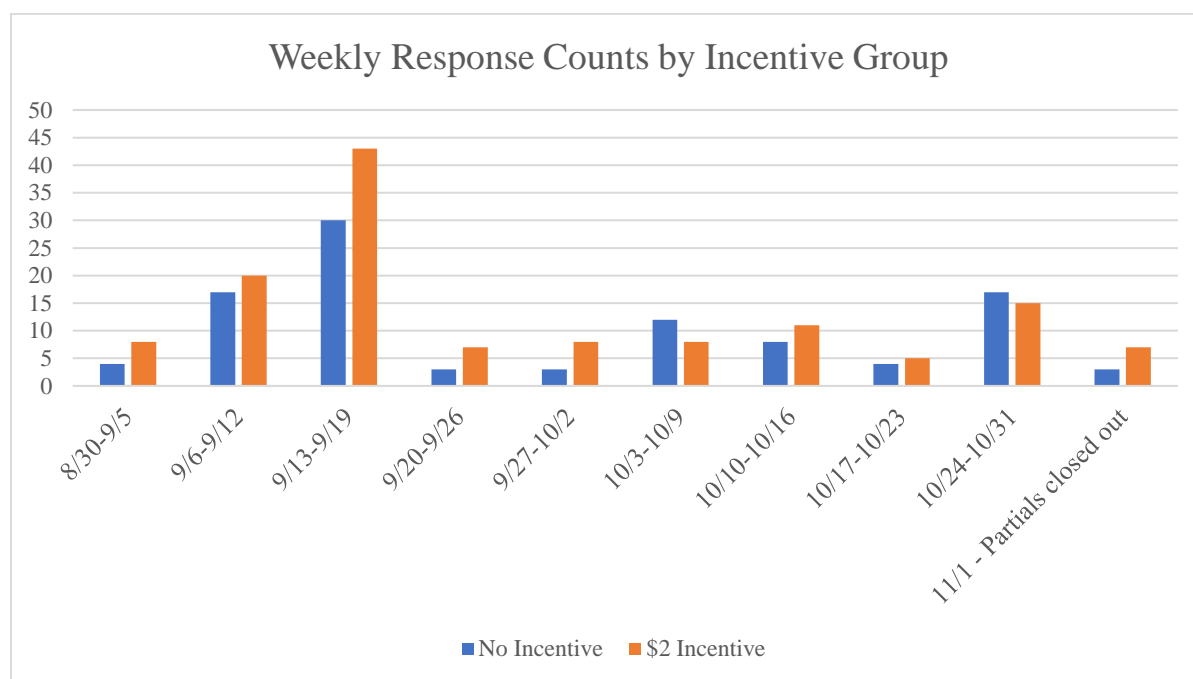
Data Preparation

CSR carried out the data preparation, which required the labeling, cleaning, and merging of paper and online data across both the main, probability-based sample and the supplemental non-probability sample. Responses from the probability 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 most complete and/or first submission was accepted and subsequent entries were dropped from the data file. A variable within the file indicates if the response is from the probability or non-probability sample. All data preparation was carried out using SPSS software (version 28).

Weighting

As noted, the probability sampling design for the study included stratification across size and industry as a means to increase variation across these characteristics 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. To get accurate estimates of the survey population, a total weight was calculated for cases in each stratum. 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 requires the use of statistical software that is capable of variance estimation in data from a complex sample design.

Margin of Error

The margin of error for the probability-based responses[1] is approximately ±6.5[2] 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 6.5 percentage points of the population mean (that is, the mean of all businesses in Northern Virginia) 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.

For questions regarding this report or the 2023 Workforce Index survey, contact the Director of the Center for Survey Research, Kara Fitzgibbon, at 434-243-5224 or ksf5fe@virginia.edu.

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[1] A margin of error cannot be calculated for non-probability samples.

[2] The margin of error has taken into account each the design effect (*deff*) of weighting as well as the finite population correction factor (FPC). The *deff* is appropriate to include in the calculation of margin of error when the sample calculations use large weights for analysis in a stratified design, which applies to this study's probability sampling technique. The overall probability sample's design effect of weighting is 1.16. The finite population correction factor (FPC) is appropriate to include when the sample is drawn without replacement from more than 5% of the population, which applies this study's probability sampling technique. The probability sample's FPC is 0.96.

Appendix A:
Questionnaire

2023 Northern VA Workforce Index Survey

Northern Virginia businesses have faced significant challenges over the past two years, including the COVID-19 pandemic, temporary shut-downs, supply-chain disruptions, rising costs and labor scarcity. This survey, which we hope to repeat annually, is aimed at gathering intelligence on current workforce and talent-related issues for businesses in our region. Your answers to the questions below will help us to understand and report on employer perspectives and practices related to these issues.

Your responses will be kept strictly confidential with the UVa Center for Survey Research. Results from the survey will be reported in aggregate with no identifying information attached. Once you have completed the questionnaire, please mail it back in the enclosed, postage-paid envelope.

A. About You and Your Business

A1. Please select the position that best describes your role within your organization, business, or company (or that is the closest possible fit).
1   Director of Human Resources/Talent Management
2   Other HR (please specify): _____
3   C-Suite/Executive (e.g. CEO, COO, CTO, EVP, VP, AVP, etc.)
4   Other Manager (please specify): _____
5   Other (please specify): _____

A2. For how long have you been employed *in Northern Virginia* with this organization, business or company?
1   Less than one year
2   1 to 2 years
3   3 to 5 years
4   More than 5 years

A3. Does your business have multiple locations?
1   Yes
2   No, only 1 location [**GO TO A4, PAGE 2**]
3   No, we are fully remote [**GO TO A5, PAGE 2**]

> A3a. **(If A3=YES)** Are hiring and talent management decisions primarily made at your location or another location of your business?
> 1.   At my location
> 2.   At another location
> 3.   Other (please specify): _____
> 4.   Don't know/Not sure

Please answer our questions with reference to how hiring and talent management are conducted across your business, whether at your location or elsewhere.

A4. (If A3=1 or 2) Please select the jurisdiction in which your business is located. If your business has multiple locations select each jurisdiction in which you have a location.

- ❑ Alexandria City, VA
- ❑ Arlington County, VA
- ❑ Loudoun County, VA
- ❑ Fairfax City, VA
- ❑ Fairfax County, VA
- ❑ Falls Church City, VA
- ❑ Manassas City, VA
- ❑ Manassas Park City, VA
- ❑ Prince William County, VA
- ❑ Washington, D.C.
- ❑ Frederick County, MD
- ❑ Montgomery County, MD
- ❑ Prince George's County, MD
- ❑ Other location(s) in Virginia
- ❑ Other location(s) in Maryland
- ❑ Other locations elsewhere

A5. Is your business a federal government contractor?

1 Yes
2 No
3 Don't know/Not sure

B. Economic/Business Outlook

B1. In the last 12 months, how has the number of paid employees changed at your business *in Northern Virginia*?

1 Decreased significantly (by 15% or more)
2 Decreased (by less than 15%)
3 No significant change
4 Increased (by less than 15%)
5 Increased significantly (by 15% or more)

B2. Compared with the previous year, would you say that filling job openings in Northern Virginia in the last 12 months has been:

1 Much more difficult
2 More difficult
3 About the same
4 Easier
5 Much easier
6 Unable to rate

B3. Compared with the previous year, would you say that employee resignations in the last 12 months at your business have been:

1   Much lower
2   Somewhat lower
3   About the same
4   Somewhat higher
5   Much higher
6   Unable to rate

B4. How does your business anticipate the number of paid employees in Northern Virginia will change over the next 12 months?

1   Decrease significantly (by 15% or more)
2   Decrease (by less than 15%)
3   No significant change
4   Increase (by less than 15%)
5   Increase significantly (by 15% or more)

B5. What is your level of optimism regarding the <u>regional economy's overall</u> prospects over the next year (in terms of growth, changes in employment/productivity, innovation, etc.)?

1   Very pessimistic
2   Somewhat pessimistic
3   Neither pessimistic nor optimistic
4   Somewhat optimistic
5   Very optimistic

B6. What is your level of optimism regarding <u>your business'</u> prospects over the next year (in terms of growth, profit, expansion, innovation, etc.)?

1   Very pessimistic
2   Somewhat pessimistic
3   Neither pessimistic nor optimistic
4   Somewhat optimistic
5   Very optimistic

C. Hiring and Recruitment Trends

C1. Employers face many possible barriers to hiring or expanding employment. In the last 12 months, how much of a barrier has each of the following been for your business?

	A major barrier	A significant barrier	A minor impediment	Not a problem at all	Not sure/ Not applicable
a. Candidates lack necessary education and/or professional experience	1	2	3	4	9
b. Candidates lack basic credentials (e.g. a driver's license, the ability to pass background check/drug test, etc.)	1	2	3	4	9
c. Candidates lack necessary professional credentials/certification (e.g. PMP, CompTIA)	1	2	3	4	9
d. Otherwise qualified candidates lack necessary security clearance	1	2	3	4	9
e. Otherwise qualified candidates lack citizenship or necessary immigration status	1	2	3	4	9
f. Overall shortage of interested or available candidates (i.e., too few applicants)	1	2	3	4	9
g. Government policies or regulations	1	2	3	4	9
h. High physical capital costs (e.g. equipment, facilities)	1	2	3	4	9
i. High labor costs (salary, benefits, or other compensation)	1	2	3	4	9

C2. In the past 12 months, has your business faced any other significant barriers to hiring or expanding employment?

1 Yes
2 No

C2a. **(If C2=YES)** What other significant barriers to hiring or expanding employment has your business faced?

_____

_____

_____

Please answer question C3 for each of the following recruitment sources. Answer C4 only for those sources that you use.	**C3. Does your business use any of these sources to recruit talent?**			**C4.** *If your business used this source*, how frequently do candidates recruited from this source get hired?				
	Yes	**No**	**Don't know/ Not sure**	**Never**	**Rarely**	**Sometimes**	**Very often**	**Nearly always**
a. Online job boards (Indeed, Monster, etc.)	1	2	3	1	2	3	4	5
b. Company/business job board	1	2	3	1	2	3	4	5
c. Internal hiring/advancement	1	2	3	1	2	3	4	5
d. External recruiting firms	1	2	3	1	2	3	4	5
e. Staffing agencies	1	2	3	1	2	3	4	5
f. Traditional media advertising (newspapers/magazines, billboards, TV, radio, etc.)	1	2	3	1	2	3	4	5
g. Social media or online advertising	1	2	3	1	2	3	4	5
h. Word of mouth/employee referral	1	2	3	1	2	3	4	5
i. Direct college/university recruitment (e.g. job fairs, student career services, etc.)	1	2	3	1	2	3	4	5
j. Non-traditional training organizations (e.g., bootcamps)	1	2	3	1	2	3	4	5
k. Industry association/non-profit/community partnerships	1	2	3	1	2	3	4	5
l. Internships	1	2	3	1	2	3	4	5
m. Apprenticeships	1	2	3	1	2	3	4	5
n. Other work-based learning programs (e.g., externships, job shadowing, etc.)	1	2	3	1	2	3	4	5
o. Other (please describe): _____	1	2	3	1	2	3	4	5

C5. How many interns has your business employed over the past 12 months?

1 None
2 1 – 5
3 6 – 10
4 11 – 20
5 Over 20

C6. How often do you require each of the following from job applicants or new hires?

	None (0%)	Few (1-25%)	Some (26-50%)	Many (51-75%)	Most (76-99%)	All (100%)
a. Background check	1	2	3	4	5	6
b. Disclosure of criminal history	1	2	3	4	5	6
c. No felony arrests or convictions	1	2	3	4	5	6
d. Drug test	1	2	3	4	5	6
e. U.S. citizenship	1	2	3	4	5	6
f. Security clearance	1	2	3	4	5	6

C7. 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?

1 Less than a high school diploma
2 High school diploma, or equivalent (GED, etc.)
3 Some college, but no degree
4 Professional certificate or vocational training (including apprenticeship)
5 Associate's/2-year degree
6 Bachelor's/4-year degree
7 Master's degree
8 PhD or Professional Doctorate (MD, JD, EdD, etc.)
9 Don't know/Not sure
10 Our business has no typical requirements for minimum level of education

C8. When making hiring decisions for *entry-level positions* at your business, how important is a candidate's formal level of education or whether they meet certain degree requirements?

1 Not at all important
2 Somewhat important
3 Important
4 Very important
5 Essential

C9. Thinking about your hiring across *all* positions that have an educational requirement, 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)?

1 Never
2 Rarely
3 Sometimes
4 Very often
5 Always

C10. Businesses sometimes have to adjust their hiring criteria based on market demands and needs. Considering positions for which your business has actually hired in the past 12 months, have you reviewed hiring criteria for…

1 All positions
2 Many positions
3 Some positions
4 No positions

C11. How would you rate the following types of education institutions on their ability to prepare students adequately to succeed in your company?

	Excellent	Very good	Good	Only fair	Poor	Unable to rate
a. Community colleges	1	2	3	4	5	9
b. Public 4-year colleges and universities	1	2	3	4	5	9
c. Private 4-year colleges and universities	1	2	3	4	5	9
d. Graduate schools	1	2	3	4	5	9
e. Private training providers (bootcamps, etc.)	1	2	3	4	5	9

C12. Which of the following do you find more difficult in hiring, candidates with adequate baseline/"soft" skills (e.g., communication, attention to detail, teamwork, etc.) or candidates with adequate technical/"hard" skills (e.g., repair, coding, design, etc.).

1 It is more difficult to find candidates with soft skills than hard skills
2 It is more difficult to find candidates with hard skills than soft skills
3 It is about the same to find candidates with soft skills and hard skills

C13. How do you measure or assess whether candidates possess the baseline/"soft" skills necessary for a position? *Please select all that apply.*

❑ Resume/cover letter
❑ Responses to interview questions
❑ Group interview (i.e., with multiple candidates at once)
❑ Pre-employment skills assessments/tests
❑ Reference checks
❑ Other (please describe): _____

C14. Does your business use an applicant tracking system (ATS), such as Taleo, Greenhouse, Workday, iCIMS, Brassring, etc., to help handle recruitment and hiring?

1 Yes
2 No
3 Don't know

C14a. **(If C14=YES)** For which of the following recruitment and hiring tasks do you use your ATS software? *Please select all that apply.*

❏ Organization and management of candidates and application materials
❏ Pre-interview screening questions (i.e., "knockout" questions)
❏ Automated screening/parsing of resumes for keywords and credentials
❏ Automated ranking of resumes/applications
❏ Communication with candidates (interview scheduling, follow-up emails, etc.)
❏ Tracking key performance metrics in the recruitment/hiring process
❏ Other (please describe): _____

C15. In the next 1-3 years, how likely is each of the following possible changes in your hiring or recruitment practices?

	Likely to increase	Probably stay the same	Likely to decrease
a. Use of automated hiring software (applicant tracking software, machine learning solutions, etc.)	1	2	3
b. Size of your recruitment team	1	2	3
c. Use of remote hiring methods (video interviews, etc.)	1	2	3
d. Inclusion of salary ranges on job posting	1	2	3
e. Consideration of candidates currently living in other cities/states for fully remote positions	1	2	3
f. Use of part-time, contract, or temporary workers (including "gig" workers)	1	2	3
g. Number and types of jobs requiring technology skills	1	2	3
h. Emphasis on diversity, equity, and inclusion in hiring	1	2	3
i. Use of internal recruiting and advancement	1	2	3
j. Use of work-based learning models (i.e., internship, apprenticeship, etc.)	1	2	3

C16. Are there other changes in your hiring or recruitment practices that are likely to happen in the next 1-3 years?

    1   Yes
    2   No

> C16a. **(If C16=YES)** What other changes in your hiring or recruitment practices are likely to happen in the next 1-3 years?

_____

_____

_____

D. Employment, Training and Professional Development

D1. In response to worker shortages, covid restrictions, or other factors, how have you changed your employee benefits package?

	Enhanced	Stayed the same	Reduced	Do not offer
a. Healthcare benefits	1	2	3	9
b. Paid vacation and sick leave	1	2	3	9
c. Paid parental/family leave	1	2	3	9
d. Flexible scheduling for salaried workers	1	2	3	9
e. Predictable scheduling for hourly workers	1	2	3	9
f. Telework/remote work options	1	2	3	9
g. Employee ownership options (including stock)	1	2	3	9
h. In-office perks or activities (free snacks, recreational options, etc.)	1	2	3	9
i. Performance-based bonuses or other incentives	1	2	3	9
j. Legal consultation services	1	2	3	9
k. Matching retirement contributions	1	2	3	9
l. Housing assistance	1	2	3	9
m. Other (please describe): _____	1	2	3	9

Please answer question D2 for each of the following professional development or training benefits. Answer D3 only for those benefits that are offered.	**D2. Do you offer the following types of professional development or training benefits for existing employees at your business?**			**D3.** *If you offer the benefit*, **approximately how many of your eligible employees use the following professional development or training benefit?**					
	Yes	**No**	**Don't know/Not sure**	**None (0%)**	**Few (1-25%)**	**Some (26-50%)**	**Many (51-75%)**	**Most (76-99%)**	**All (100%)**
a. In-house training performed by subject-matter experts or a dedicated development team	1	2	3	1	2	3	4	5	6
b. Contracted training offered through a private vendor	1	2	3	1	2	3	4	5	6
c. On-demand/web-based learning platforms and services (e.g., Lynda, Microsoft Virtual Academy, Codeacademy, etc.)	1	2	3	1	2	3	4	5	6
d. Paid sabbatical or professional development leave	1	2	3	1	2	3	4	5	6
e. Tuition reimbursement (including payment for certifications, external training, etc.) or individual learning accounts	1	2	3	1	2	3	4	5	6
f. Formal mentoring process (with an assigned mentor, regular meetings, status updates, etc.)	1	2	3	1	2	3	4	5	6
g. Flexible schedules for continuing education	1	2	3	1	2	3	4	5	6
h. Other (please describe): _____	1	2	3	1	2	3	4	5	6

D4. What percentage of your business' workforce is eligible for the following types of remote work/telework arrangements? *(Percentages should add up to 100%)*

Work arrangement	Percent of your workforce eligible for this arrangement
a. Fully remote (100% of work hours)	_____%
b. Mostly remote (50% or more of work hours remote)	_____%
c. Mostly in-house (less than 50% of work hours remote)	_____%
d. Not eligible for remote work	_____%
Total	**100%**

D5. How have the following aspects of your business' remote work/telework policy changed since early 2020 (the time prior to the COVID-19 pandemic)?

	Increased a lot	Increased a little	No real change	Decreased a little	Decreased a lot	Not sure/Not applicable
a. Share of workforce eligible for telework	1	2	3	4	5	9
b. Number of telework hours per week, on average	1	2	3	4	5	9
c. Geographic area in which remote workers may reside	1	2	3	4	5	9
d. Attention to/support for remote office arrangements (including technology)	1	2	3	4	5	9

D6. Thank you so much for your thoughtful responses. Please provide any additional comments or information you think we should know *(optional)*.

_____

_____

_____

_____

D7. Please enter the date when you completed this questionnaire:

_____

Thank you for your help and taking the time to complete this questionnaire.

No postage is required to mail back this questionnaire.

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Please return the questionnaire to us at:

Center for Survey Research

University of Virginia

P.O. Box 400767

Charlottesville, VA 22904-4767