



NORTH DAKOTA WORKFORCE SURVEY

2018

The 2018 ND Workforce Survey was sponsored by the ND Workforce Development Council and the Greater North Dakota Chamber, and was supported by NDSU's Center for the Study of Public Choice and Private Enterprise (PCPE) through analysis and compilation.

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INTRODUCTION

Workforce development and relevant education present some of the greatest challenges, as well as opportunities for North Dakota. In June of 2018, The Workforce Development Council (WDC) in partnership with the Greater North Dakota Chamber and NDSU's Center for the Study of Public Choice and Private Enterprise (PCPE) launched a Workforce survey to deeply understand the workforce challenges of ND employers. The information provided herein was prepared by NDSU's PCPE. Any errors, omissions, or opinions are solely that of NDSU's PCPE.

SUMMARY OF FINDINGS

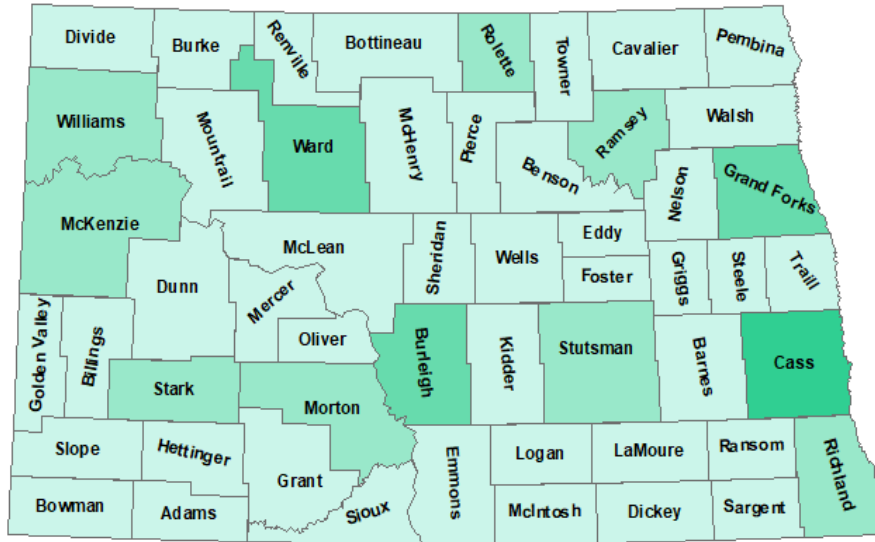
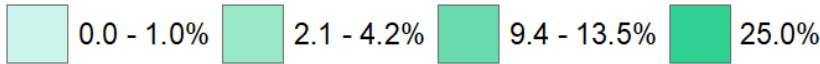
The survey results confirm the state labor market is highly competitive. Hiring managers are struggling to find quality workers. This shortage is exacerbated by the increasingly competitive national labor market. The survey provides valuable insight regarding workforce training and recruiting. Results show the potential for more private sector workforce investment and collaboration.

Key findings

- 28 percent of job openings go unfilled for longer than three months. (Figure 7).
- Almost half of North Dakota hiring managers see the inability to hire and retain workers as an issue for impairing company growth (Figure 9).
- 48 percent of hiring managers view high wage demands and a limited talent pool as a barrier to hiring key workers (Figure 10).
- More than 25 percent of hiring managers view wage competitiveness as a primary issue to retaining key workers (Figure 11).
- Almost a third of hiring managers aren't engaging youth as future workers (Figure 14).
- Half of hiring managers are interested in partnering with others to participate in work-based learning programs (Figure 15).
- 75 percent of hiring managers have no formal training budget (Table 5).

~NDSU Center for the Study of Public Choice & Private Enterprise

North Dakota Population Distribution



The percentage of the state total is color-coded with darker shades representing the more populated counties. Although the state's rural population makes invaluable contributions to the state economy, economic activity should be expected to concentrate in the most populous areas of the state. Intuitively, there is more commerce where there are more people.

Figure 1 ND Population US Census Bureau's Population Estimate Program (2018)

Hiring managers were asked to list each North Dakota County in which they operate. The map above is a geographic distribution of those responses. Similar to the distribution of population seen in the previous map, North Dakota commerce is centered on major population centers. The areas in and around Cass County and Grand Forks County anchor activity and responses in Eastern North Dakota. Likewise, population centers in Central and Western North Dakota are well represented.

ND Survey Respondents Locations

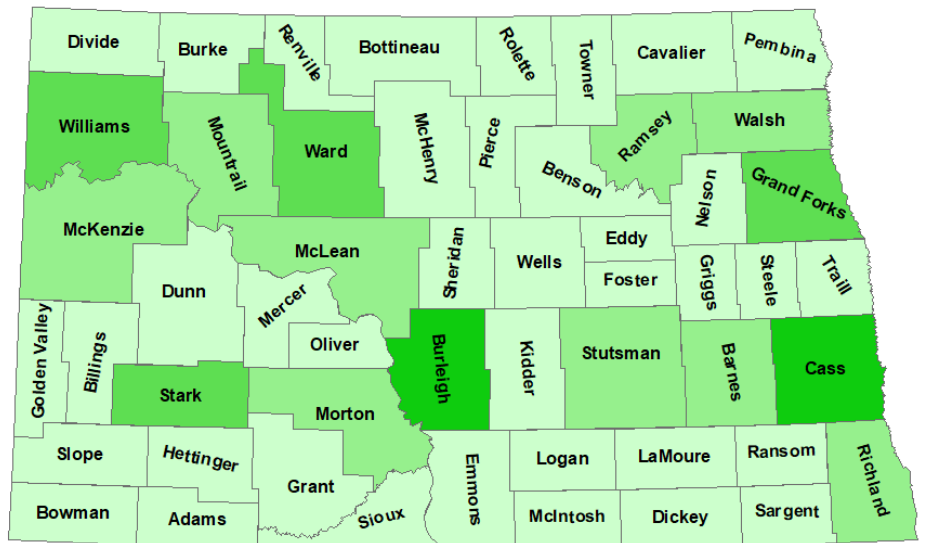
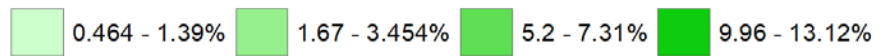


Figure 2 ND Workforce Survey Results 2018

GENERAL RESPONDENT DATA

Finance and insurance, healthcare and social assistance in addition to the real estate industry lead in the average number of locations. Firms in these industries average six locations according to survey respondents.



Figure 3 Unweighted (1464 Responses)

The vast majority of responding employers represent small and mid-sized organizations. Only 4 percent of respondents employ 500 or more employees.

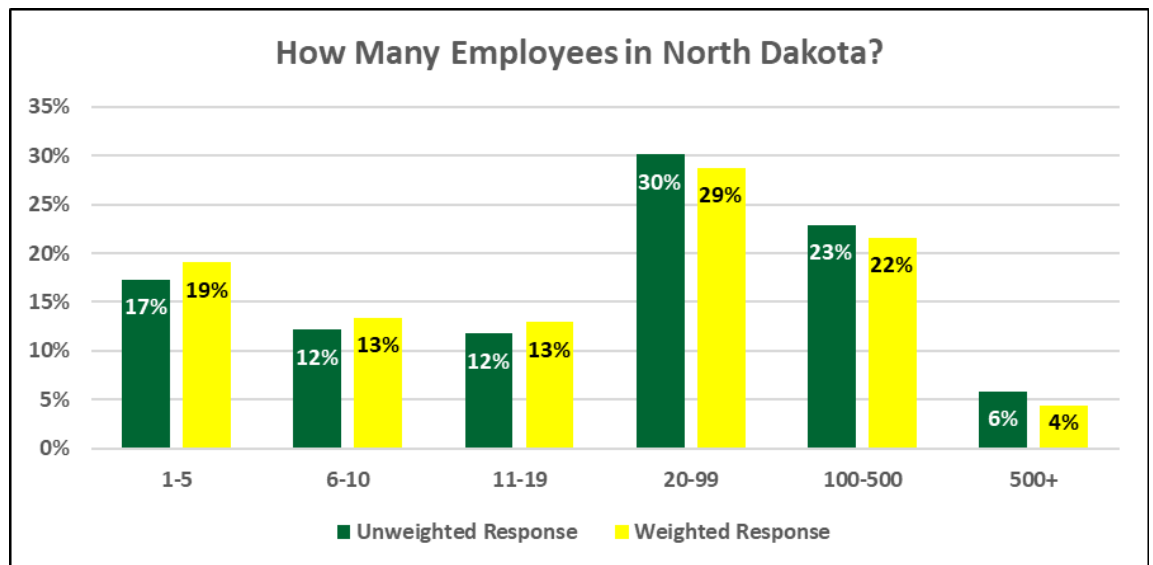


Figure 4 1464 Responses; 3% Margin of Error

Public administration and educational services lead in average years of operation. Accommodation and food service have the lowest average years of operation.

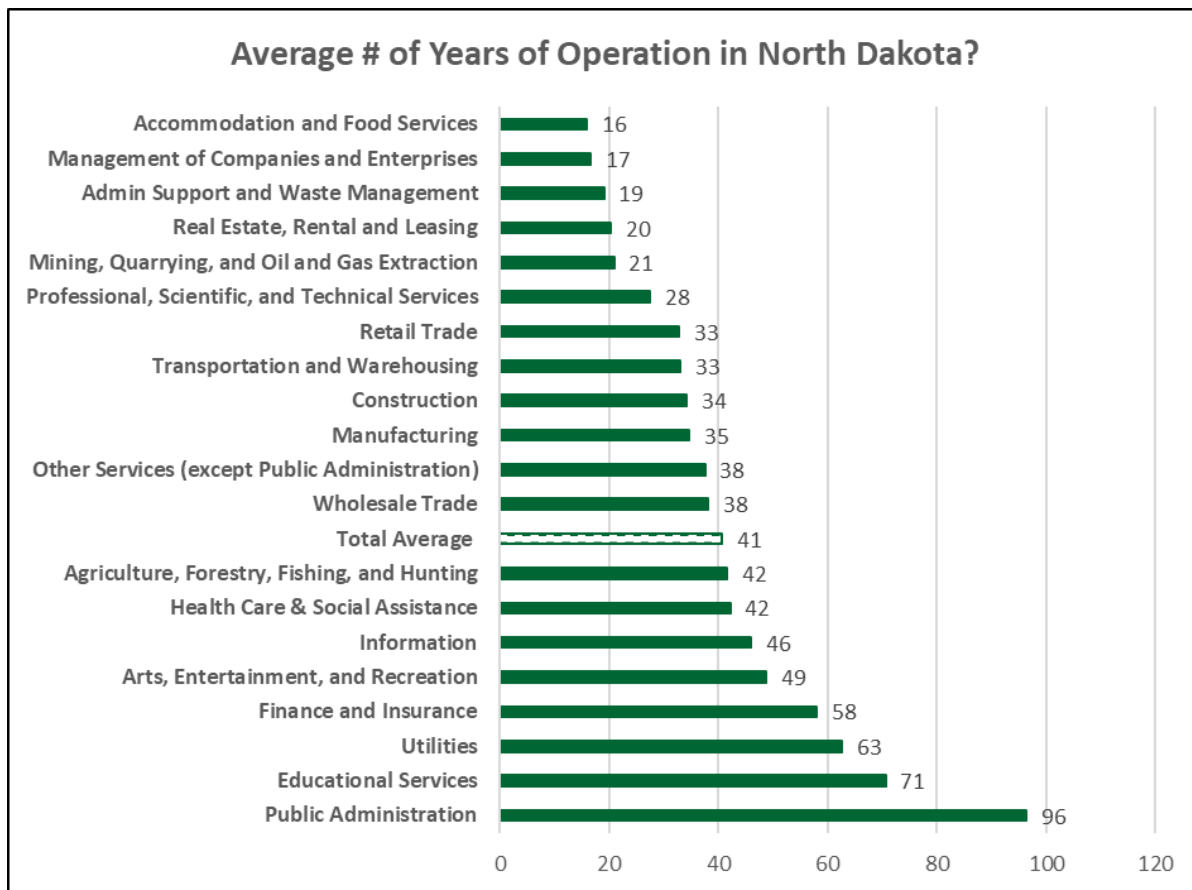
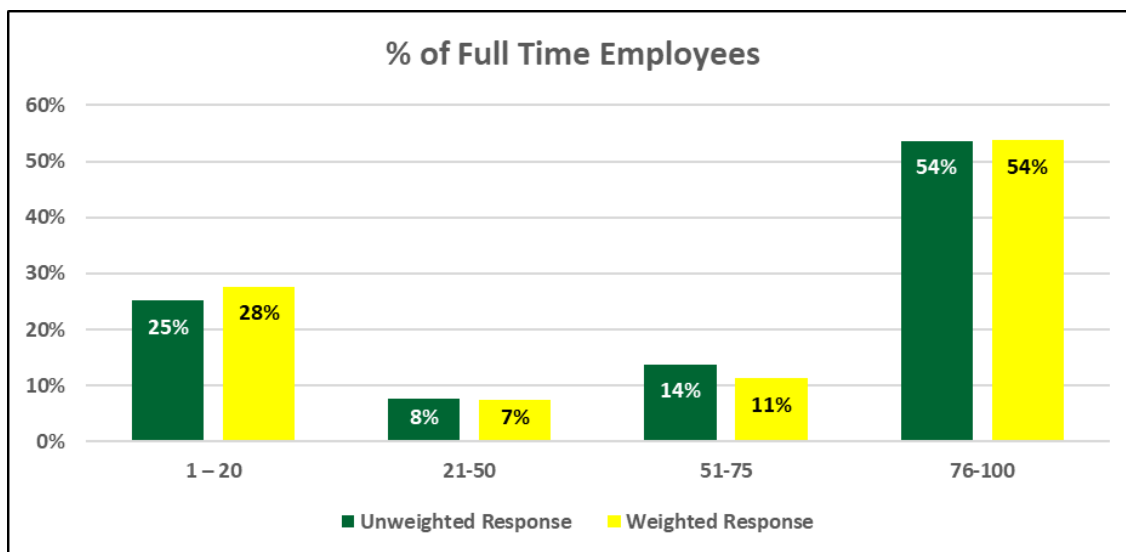


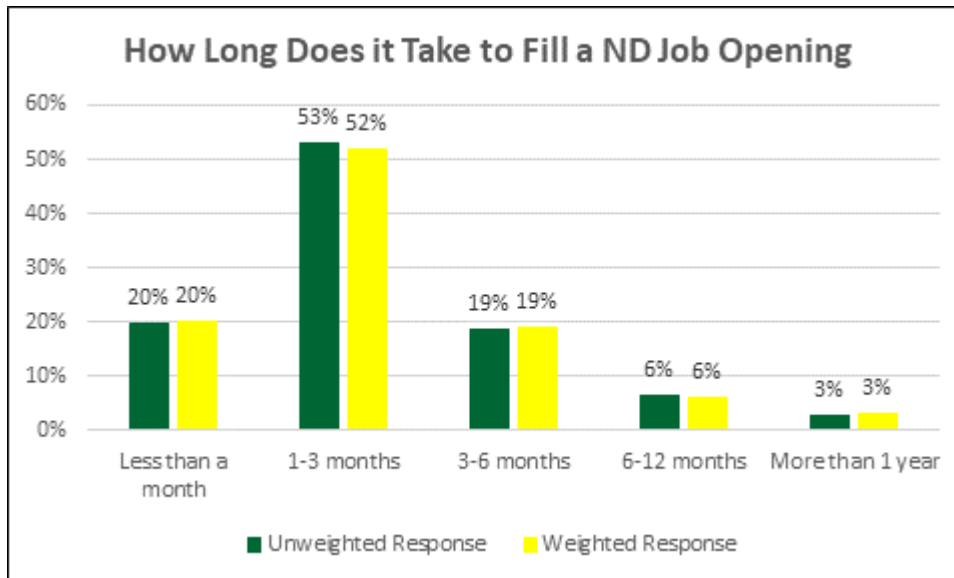
Figure 5 Unweighted (1387 Responses)



Over half of North Dakota's hiring managers describe their employee pool as being 75 to 100 percent full-time. However, a quarter of managers report less than 20 percent of their workers are full-time.

Figure 6 1446 Responses; 3% Margin of Error

HIRING & RETENTION



According to North Dakota hiring managers, more than a quarter of job openings go unfilled for longer than three months.

Figure 7 1374 Responses; 3% Margin of Error

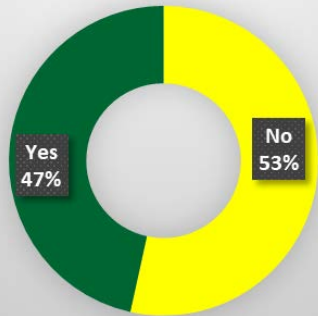
Less than half of North Dakota's hiring managers are able to keep at least 80% of new hires on past six months.



Figure 8 904 Responses; 3% Margin of Error

My Company's Growth is Limited by an Inability to Hire and/or Retain Qualified Staff

*Unweighted Responses



About 50% of North Dakota hiring managers view an inability to hire and retain workers as a barrier to growth.

*Weighted responses = 49% Yes ~ 51% No

Figure 9 1375 Responses; 3% Margin of Error

WHAT FACTORS MAKE HIRING KEY WORKERS DIFFICULT? (NON-WEIGHTED; MULTIPLE RESPONSES APPLY)

High wage demand, competition and a limited talent pool are among the top challenges facing hiring managers, according to survey respondents.

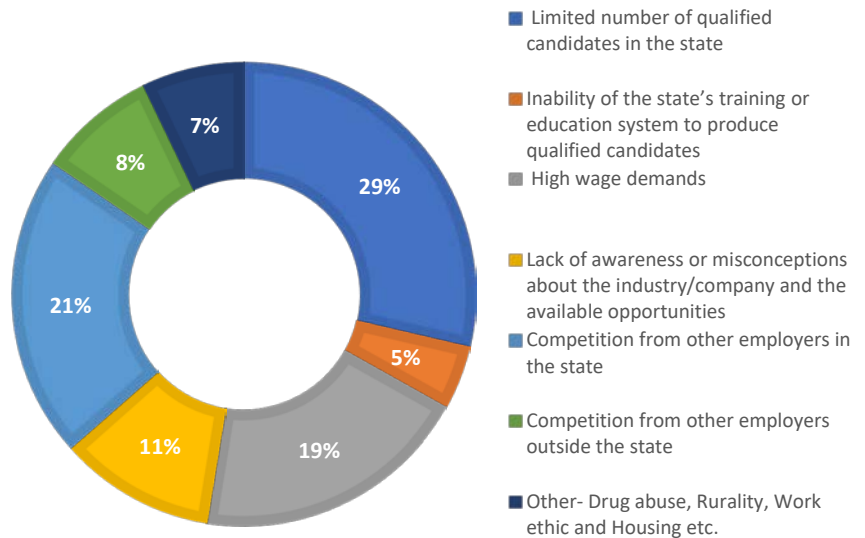


Figure 10 3354 Unweighted Responses

Wage competitiveness, in-state competition, and limited advancement opportunities are the most cited issues to retaining talent.

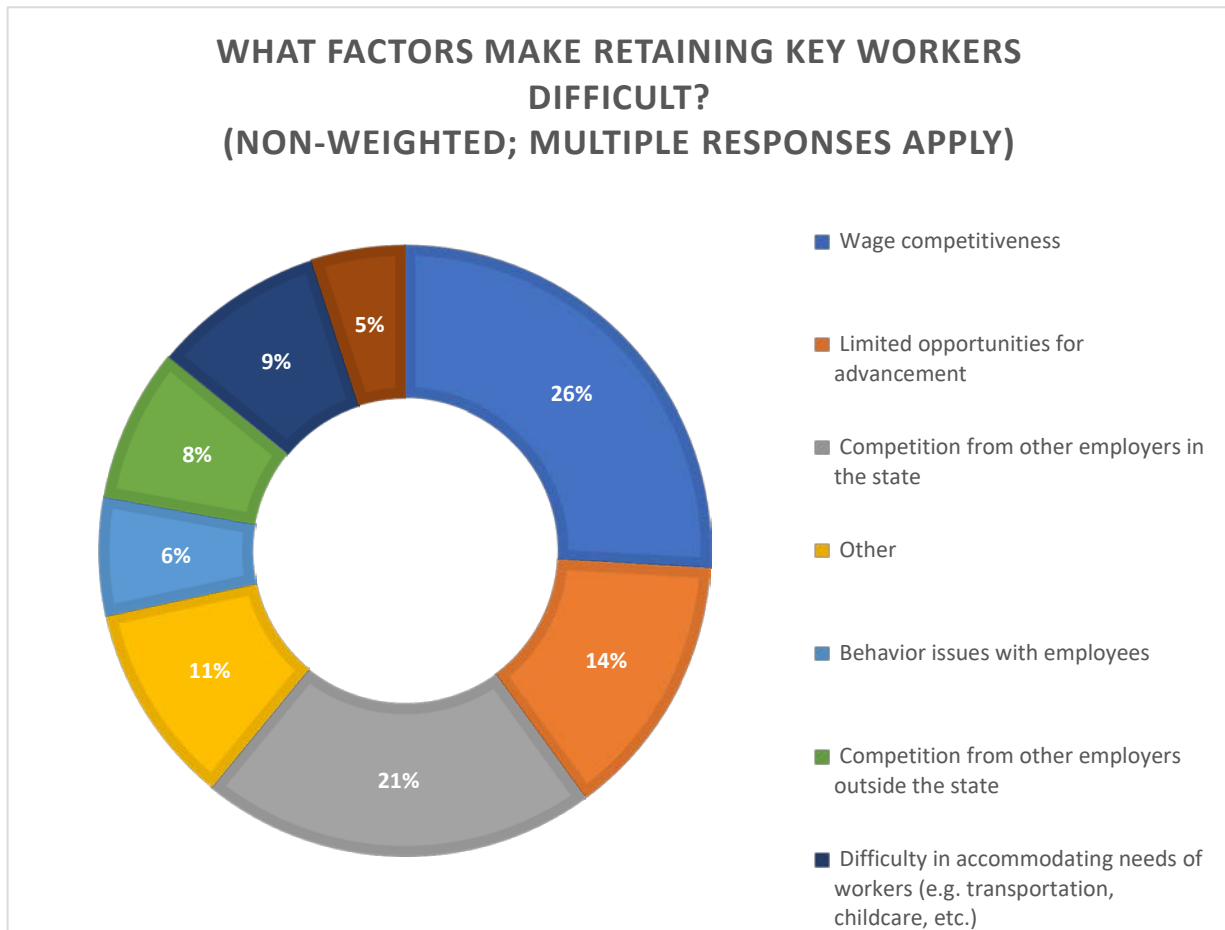


Figure 11 3352 Unweighted; Pooled Responses

Work ethic, dependability and problem-solving are among the top skills North Dakota hiring managers look for in new employees. To a lesser extent, passing a drug test has also become an issue for hiring managers.

Top critical soft skills/workplace skills relevant to your workforce needs that you are having the most difficulty identifying in new or potential employees.
(Multiple Responses Apply)

1	Work Ethic/Motivation
2	Dependability & Punctuality
3	Problem Solving/Critical Thinking
4	Communication Skills
5	Attention to Detail
6	Adaptability/Flexibility
7	Customer Focus
8	Teamwork
9	Leadership
10	Passing Pre-Employment Checks

Table 1 Unweighted Pooled Responses

High School graduates ranked highest in educational requirements.

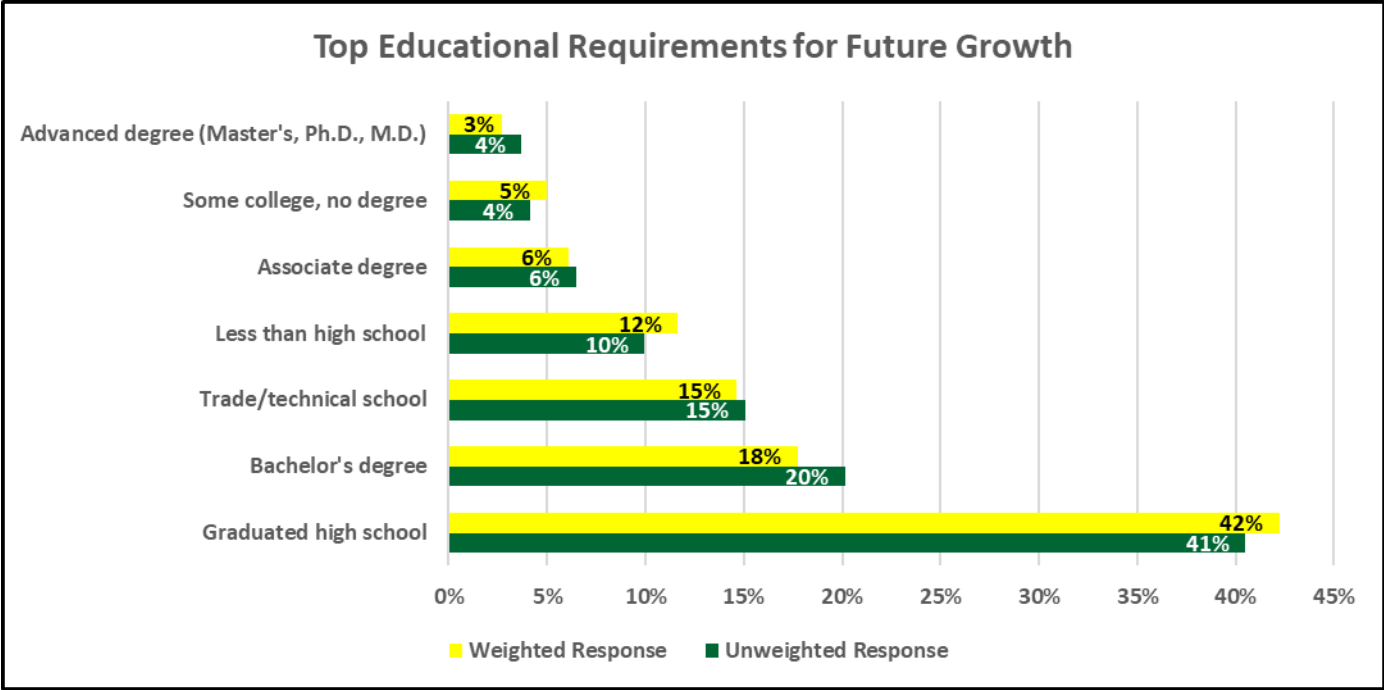
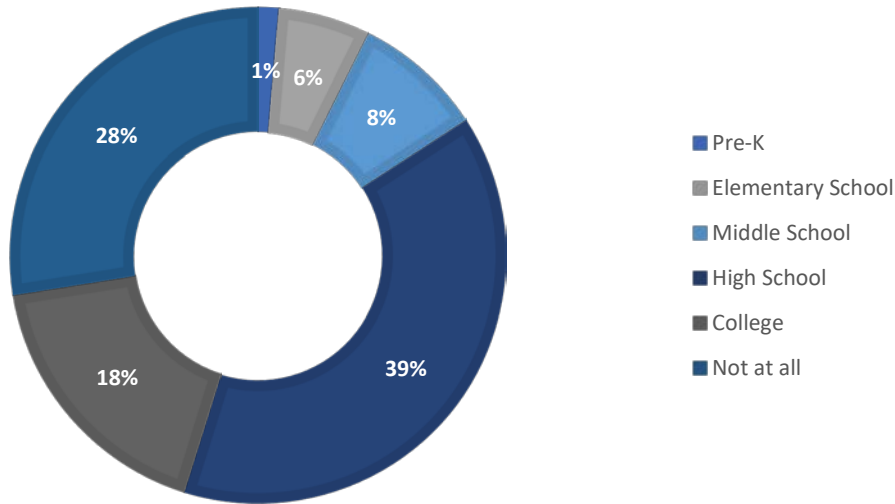


Figure 12 Unweighted; 943 Responses

RECRUITING TALENT

WHAT IS THE YOUNGEST AGE THAT YOUR COMPANY TARGETS FOR CAREER AWARENESS? (UNWEIGHTED RESPONSE)



39% of employers target high school students for career awareness.

Figure 14 Unweighted; 872 Responses; 3% Margin of Error

How do you Recruit for Open Positions?

Method	All sources	Single most effective source
Employee Referral	18%	39%
Job Service ND	15%	13%
Company Website	14%	13%
Social Media	14%	10%
Local Newspaper	10%	8%
Indeed	9%	7%
Other	6%	6%
LinkedIn	6%	3%
Outside Recruiter	4%	1%
Career Builder	2%	0%
Monster	2%	0%

Employee referrals ranked the highest for employers recruiting for open positions and are the single most effective recruiting source.

Table 2 Unweighted; Multiple Responses

How else do Employers recruit?	
Job/Career Fairs	33%
Internships/Co-ops/Apprenticeships	31%
Education Partnerships	26%
Outreach to Military Veterans	10%

Other most common methods employers use to recruit.

Table 3 Unweighted

Which organization does your company have an existing relationship with to meet your workforce needs?

Job Service ND ranks highest in existing relationships with employers.

Job Service ND	42%
ND Universities	17%
ND Community Colleges	13%
ND Career & Technical Education	9%
ND Department of Commerce	6%
ND Vocational Rehabilitation	5%
ND Local K-12	5%
ND Labor Unions	3%

Table 4 Unweighted; Pooled Responses

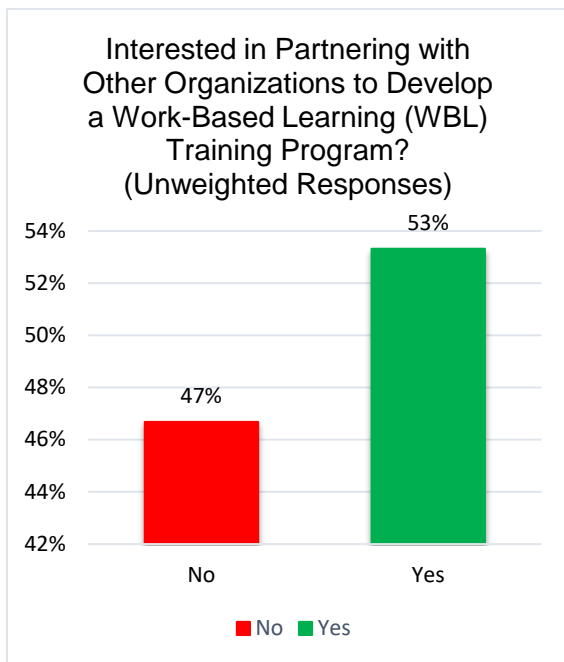
TRAINING AND DEVELOPMENT

Do you have a formal training budget?		
Response	Unweighted	Weighted
YES	30%	25%
NO	70%	75%

About 75% of respondents do not have a formal training budget

Table 5 919 Responses; 3% Margin of Error

Employers are fairly split on the desire to partner with other organizations to develop work-based learning (WBL) training programs. *Weighted Responses = Yes 50% and No 50%*



Although employers are fairly split on partnerships for WBL programs, only 38% are willing to financially contribute to these programs to meet workforce needs. *Weighted Responses = Yes 37% and No 63%*

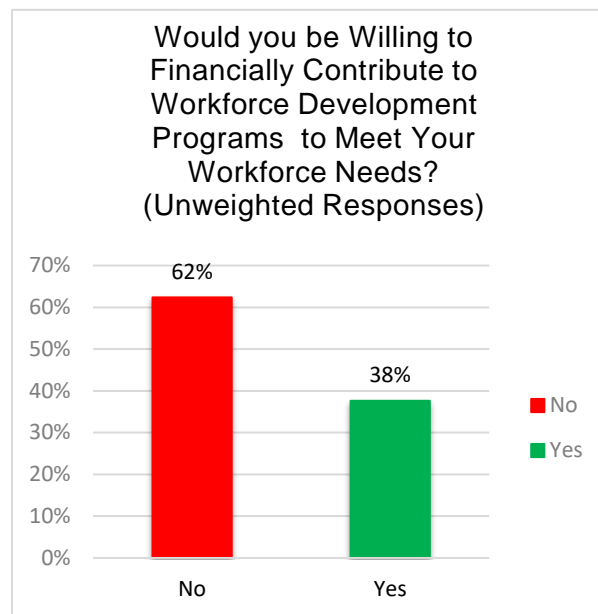


Figure 15 874 Responses; 3% Margin of Error

Figure 16 808 Responses; 3% Margin of Error

The inability to pull employees away from production time is a major factor causing difficulty in training employees.

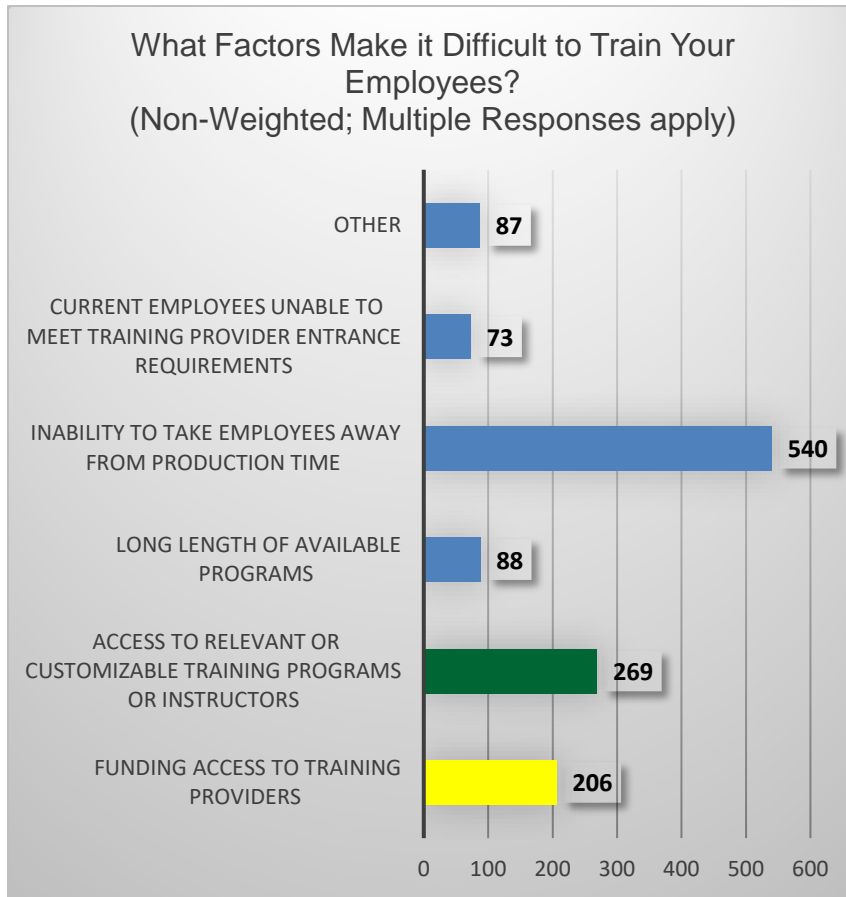


Figure 17 1263 Pooled Responses

TRAINING METHODS	
Internal	38%
Online	18%
Contracted Providers	12%
Internships/Apprenticeships/Practicums	12%
Local Technical College	7%
Local College or University	6%
Other	4%
Local School Systems	3%

Internal training methods ranked the highest at 38%.

Table 6 Unweighted; Pooled Responses

CURRENT AND FUTURE TRENDS

Employees age 35-44 make up the largest percentage of workers, followed by employees age 45-54.

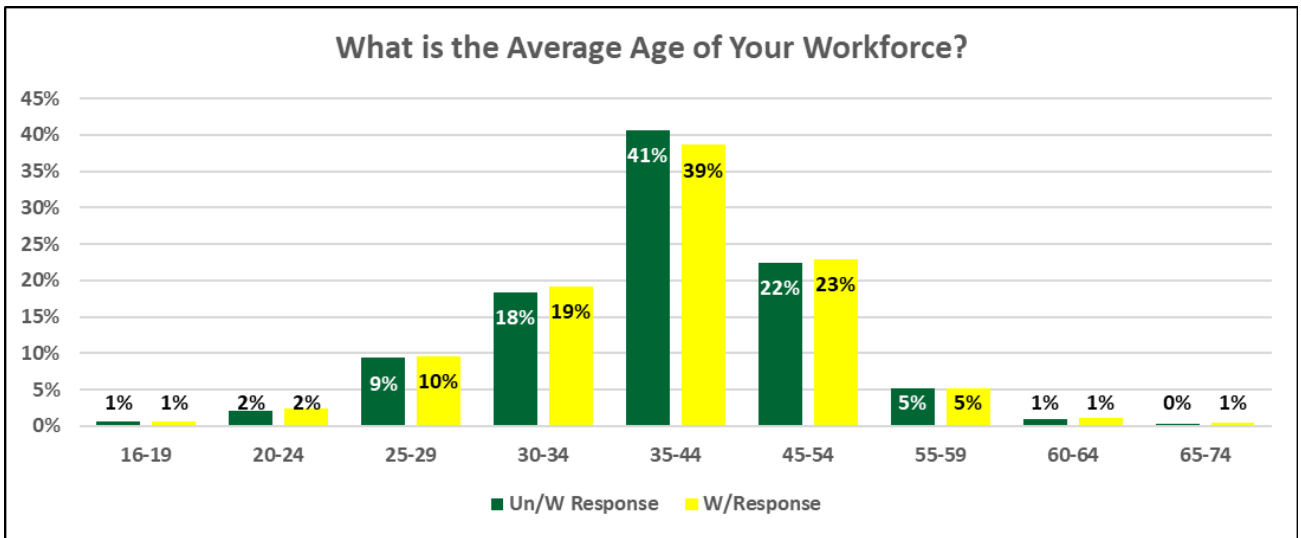
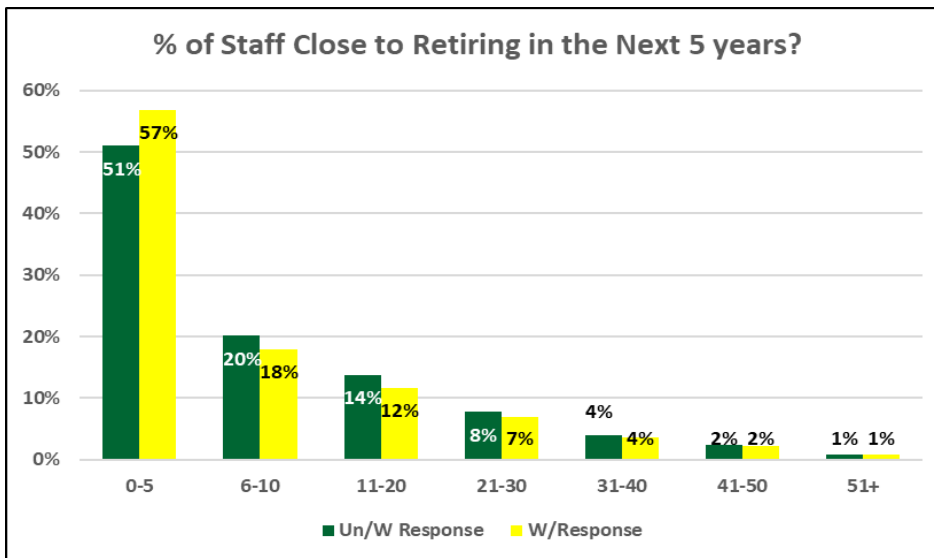


Figure 18 899 Responses; 3% Margin of Error



The majority of ND employers expect to lose less than 10% of their workforce to retirement within the next five years.

Figure 19 904 Responses; 3% Margin of Error

Unlike the 5-year outlook, employers expect to see far more retirements in the next 10 years as baby-boomers exit the labor force.

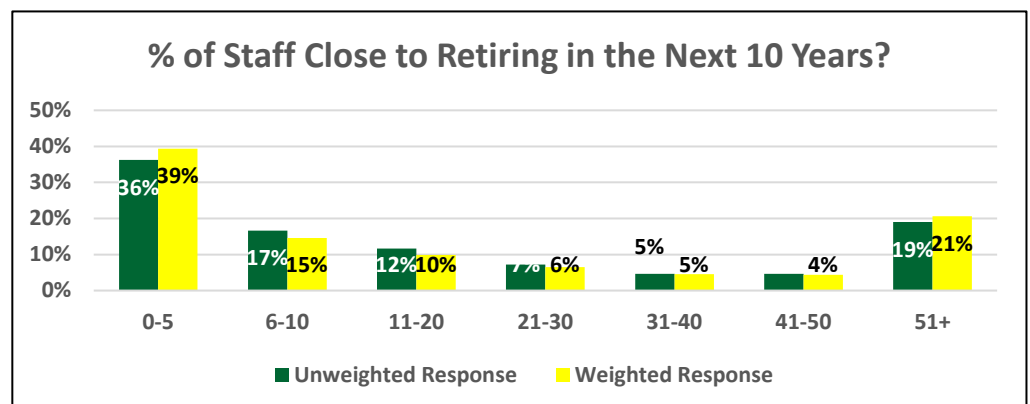


Figure 20 903 Responses; 3% Margin of Error

Survey results indicate the majority of employers have less than five current job openings.

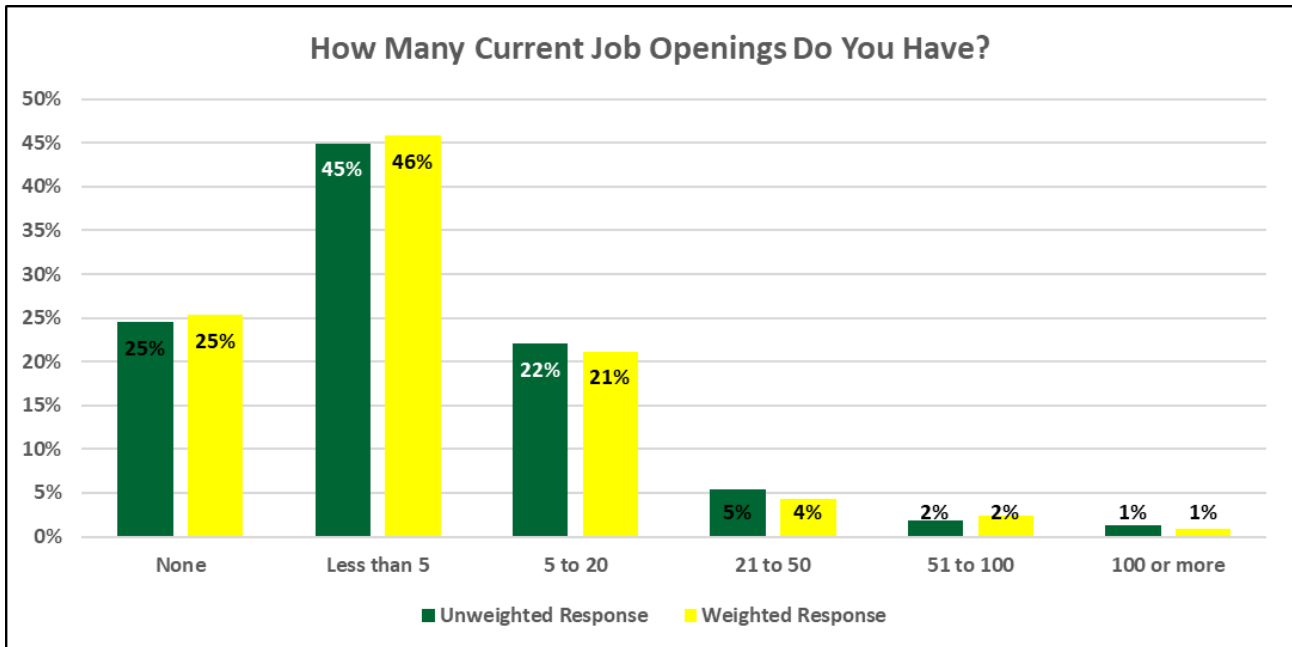


Figure 21 1293 Responses; 3% Margin of Error

Most ND employers have added less than 20 new employees over the last 12 months.

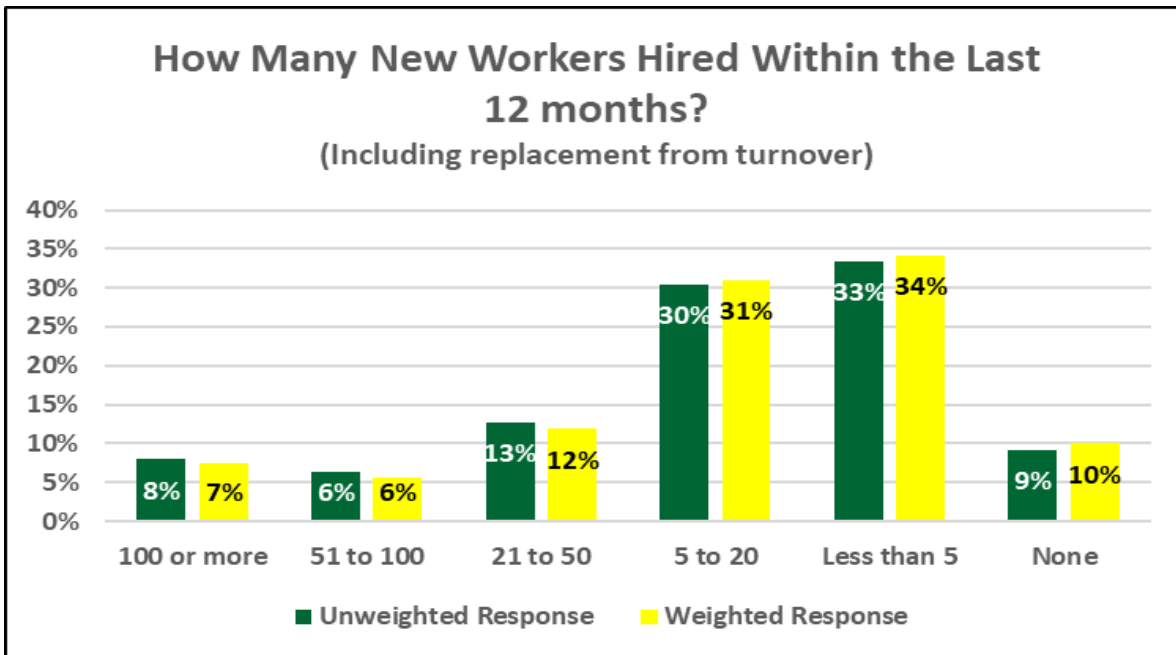


Figure 22 1293 Responses; 3% Margin of Error

NEW FULL-TIME JOBS OUTLOOK

NEW FT JOBS	2019	2020-2021	2022-2023
None	25%	25%	33%
Less than 5	45%	45%	27%
5-20	22%	22%	4%
21-50	5%	5%	4%
51-100	2%	3%	32%
100+	1%	0%	0%

Table 7 1295 Responses; 3% Margin of Error

The majority of employers expect to add less than 5 percent of new jobs in 2019, 2020 and 2021. The percent of new jobs increases in 2022-2023.

EXPECTED VACANCIES

EXPECTED VACANCIES	2019	2020-2021	2022-2023
None	12%	12%	13%
Less than 5	45%	45%	44%
5-20	28%	28%	28%
21-50	7%	8%	8%
51-100	4%	4%	4%
100+	4%	4%	4%

Table 8 1254 Responses; 3% Margin of Error

Most employers expect to have less than 20 vacancies in 2019. This trend continues through 2023.

The top five industries expecting to create the most jobs from 2019-2023 include healthcare, mining, construction, manufacturing, and retail trade.

EXPECTED JOB CREATION BY INDUSTRY

INDUSTRY	2019	2020-2021	2022-2023
Health Care & Social Assistance	2311	3061	3214
Mining, Quarrying, and Oil and Gas Extraction	2222	2841	2616
Construction	1823	1753	1687
Manufacturing	1359	2060	1744
Retail Trade	1197	1036	996
Transportation and Warehousing	839	784	799
Professional, Scientific, and Technical Services	651	911	928
Admin Support and Waste Management	630	658	635
Accommodation and Food Services	455	445	461
Educational Services	373	373	362
Finance and Insurance	348	473	441
Other Services (except Public Administration)	329	310	282
Wholesale Trade	323	409	408
Arts, Entertainment, and Recreation	309	312	299
Information	287	315	273
Public Administration	250	309	292
Utilities	238	173	158
Agriculture, Forestry, Fishing, and Hunting	149	160	151
Real Estate, Rental and Leasing	98	113	128
Management of Companies and Enterprises	0	0	0
Industry total	14191	16496	15874

Table 9 Unweighted Sample Results; 1295 Responses

CONCLUSION

The survey results confirm the state labor market is highly competitive. The current workforce shortage is only exacerbated by the increasingly competitive national labor market. However, there is valuable insight provided regarding workforce training and recruiting. Although most managers are eager to hire, they are slow to invest and devote resources to improve local talent.

There are no clear public policy solutions to address this. However, survey results do show the potential for more private sector collaborations including opportunities for business leaders to invest in youth engagement to attract high school and college students into their respective industries and dedicate resources to training for improved retention.

The state could play a limited role in facilitating and encouraging private partnerships such as apprenticeships, internships and like programs. However, the private sector must lead in addressing the most critical workforce development issues due to the localized and industry-specific knowledge required to competently train workers for the jobs needed.

~NDSU Center for the Study of Public Choice & Private Enterprise

APPENDIX

The North Dakota Workforce Survey was designed to give policymakers and hiring managers a comprehensive understanding of the hiring challenges within North Dakota. The survey consisted of 40 questions covering a host of issues related to workforce challenges, including hiring, training, and retention of workers. Unlike the numerous surveys conducted by the Bureau of Labor Statistics, this survey was not designed to estimate overall employment, but rather recognize the barriers facing North Dakota hiring managers.

The survey was administered online from 6/01/2018 to 6/29/2018. The online administration method allowed for expedient distribution and collection but does create some measurement issues. The random online sample yielded ample results, but there is evidence of selection bias and response bias.

Selection bias occurs when a member self-selects for survey participation (Bethlehem, J. 2010). Ideally, the online survey responses would solicit responses from hiring managers proportional to North Dakota's actual industrial make-up (Dey, E. L. 1997). As is typical in online surveying, the industry representation was fairly less than satisfactory for some sectors of the economy.

Furthermore, there is also evidence of response bias. Response bias is the tendency for survey recipients to leave certain questions unanswered (Sax, L. J., Gilmartin, S. K., & Bryant, A. N. 2003). The survey was initiated 1634 times. 167 respondents started but didn't complete the any of the survey questions. Three clearly fraudulent responses were identified and removed. In total, 170 responses were omitted from the sample due to either inadequate responses reducing the total number of respondents to 1,464. Similarly, only 895 respondents made it to the last question.

Response rates vary by question asked. The number of responses is noted below every figure and table.

To correct for the issue of selection bias, the survey utilizes industry data from the Job Service Labor Market Report. The percentage of registered businesses by industry is used as an auxiliary variable to weight-adjust responses to reflect the actual population of North Dakota Business Establishments by Industry Using data from the Job Service of North Dakota's Labor Market Information Center, we're able to weight the data according to the population of registered businesses by industry as of March 2017 by industry. Knowing the exact population parameters allows us to calculate a sampling margin of error. Due to the fact that the responses rate varies question to question the weighted adjustment is recalculated for survey questions and responses when applicable (Dey, E. L. 1997; Nulty, D. D. 2008).

$\% \text{ of ND Businesses by industry} / \% \text{ of Question Respondents by Industry} = \text{Weight Adjustment.}$

*Businesses are categorized by industry using the North American Industry Classification System.

~NDSU Center for the Study of Public Choice & Private Enterprise

REFERENCES

Bethlehem, J. (2010). Selection bias in web surveys. International Statistical Review, 78(2), 161-188.

Dey, E. L. (1997). Working with low survey response rates: The efficacy of weighting adjustments. Research in higher education, 38(2), 215-227.

Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: what can be done? Assessment & evaluation in higher education, 33(3), 301-314.

Sax, L. J., Gilmartin, S. K., & Bryant, A. N. (2003). Assessing response rates and nonresponse bias in web and paper surveys. Research in higher education, 44(4), 409-432.

United States Census Bureau's Population Estimates Program. (2018) Population and Housing Unit Estimates [Data file]. Retrieved <https://www.census.gov/programs-surveys/popest.html>