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Survey of Employer Policies on the Employment of People with Disabilities

Final Report

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Executive Summary

The U.S. Department of Labor's (DOL) Office of Disability Employment Policy (ODEP) has long focused on assisting private sector employers to hire and retain talented people with disabilities. ODEP sponsored previous projects to understand employer policies and practices regarding people with disabilities, including a survey of employer perspectives on hiring, retention, and advancement of people with disabilities conducted in 2008. In partnership with ODEP, DOL's Chief Evaluation Office (CEO) contracted with Westat to conduct the *2018 Survey of Employer Policies on the Employment of People with Disabilities* to provide a current picture of employer efforts to employ people with disabilities as well as attitudes toward people with disabilities.

Over the past dozen years, several surveys conducted by the federal government on a regular basis have implemented a standard set of disability questions, allowing for examination of statistics for people with disabilities and comparisons to people without disabilities. However, there are no comprehensive surveys examining the employer side of issues related to recruiting, hiring, advancing and retaining people with disabilities. This 2018 ODEP Survey of Employer Perspectives on the Employment of People with Disabilities was designed to provide a source of nation-wide statistics on the employment of people with disabilities from the perspective of employers. Results are compared to a survey sponsored by ODEP in 2008 (Domzal, Houtenville, and Sharma, 2008).

This executive summary begins with a brief description of the methodology followed by an overview of major findings from the survey. A more in-depth review of findings plus methodological detail is contained in the remainder of this report and its technical appendices. Overall, the results indicate that there has been some progress over the past decade, since the previous survey was conducted, in private sector employer efforts to recruit and hire people with disabilities, especially among medium-sized and large companies. However, many employers are still not making efforts to recruit and hire people with disabilities or implementing practices to make the workplace more inclusive. Findings are discussed in greater detail in the remainder of this executive summary.

Methodology

The survey included a sample of businesses drawn from a nation-wide directory . The sample was stratified by industry and company size to enable comparisons across groups of employers. The

employer survey was a 20-minute telephone survey with senior executives in 12 industries. Interviewers read respondents a definition of disability so that they were aware of who a person with a disability might be.

> Under the Americans with Disabilities Act, an individual with a disability is defined as a person who (1) has a physical or mental impairment that substantially limits one or more major life activities; (2) has a record of such an impairment; or (3) is regarded as having such an impairment.

The survey was conducted from July through October 2018. Surveys were completed with 2,023 respondents representing (when weighted) 2,007,574 companies. The response rate was 17.3 percent (using American Association of Public Opinion Research response rate 3, see Appendix A, section A.3). The statistics in this report use sample weights. Estimates for key metrics are compared to those from the 2008 survey. The study also included in-depth qualitative interviews with 20 companies that also participated in the survey.

Key Findings

- **The percentage of companies that report employing people with disabilities increased over the past decade, but people with disabilities still make up a small percentage of companies' workforces.**

The percentage of companies that report employing people with disabilities increased significantly from 18.4 percent in 2008 to 22.7 percent in 2018 (Domzal, Houtenville, and Sharma, 2008). The increases in employment over the past decade were confined to medium-sized and large companies with no significant change for small companies. Among companies that said that they had at least one current employee with a disability, 1 to 2 percent of employees had a disability, which was well below the 10.3 percent of the U.S. population ages 18-64 that has a disability (Lauer and Houtenville, 2019). It is important to note that companies were only able to report on employees with disabilities that were visible or disclosed.

- **While the percentage of companies that actively recruit and hire people with disabilities increased over the past decade, a majority of companies are not actively recruiting and hiring people with disabilities.**

The percentage of companies that actively recruit people with disabilities increased significantly from 13.5 percent in 2008 to 17.5 percent in 2018, and the percentage that hired a person with a disability in the past 12 months increased significantly from 8.5 percent in 2008 to 13.5 percent in 2018. The

increase in recruitment and hiring occurred in medium-sized (50 to 249 employees) and large (250 or more employees) companies with no changes in small (5 to 49 employees) companies.

- **Employers perceive benefits to hiring people with disabilities but also voice concerns that limit their recruiting and hiring of people with disabilities to fill job vacancies.**

The "business case" for hiring people with disabilities focuses on advantages that people with disabilities bring to the workplace. The benefits most frequently cited by companies were that hiring people with disabilities projects a positive image of the company with prospective customers (72.5%), projects a positive image of the company with prospective employees (72.0%), and increases the pool of qualified candidates (60.8%). Increasing morale (41.3%), reducing legal liability for lack of diversity (32.8%), tax incentives (30.4%), and increasing productivity (18.5%) were cited less frequently as benefits.

Despite perceiving benefits, 87 percent of companies surveyed expressed at least one concern about hiring people with disabilities. Safety on the job of people with disabilities and their coworkers was the number one concern overall (59.4%). The ability of workers with disabilities to perform job duties (55.5%) and absenteeism (51.7%) were also concerns reported by more than half of companies. Concerns about cost and attitudes of customers (28.0%), coworkers (23.8%), supervisors (17.0%), and top-level management (14.0%) were cited less frequently. Employers who expressed concerns about people with disabilities were less likely to recruit people with disabilities. Companies that were concerned about the ability of workers with disabilities to perform job duties were 17 percentage points less likely to hire people with disabilities than companies that were not concerned.

The 2008 survey found that the top five major areas of concern regarding hiring of people with disabilities were perceptions that people with disabilities were not able to handle the nature of the work, unknown cost of accommodations for workers with disabilities, lack of qualified applicants with disabilities, the actual cost of accommodations for people with disabilities, and concern for rising premiums of worker compensation programs.

- **While three inclusive recruitment and hiring practices were implemented by a majority of companies, companies were not implementing other practices that could make the workplace more welcoming for people with disabilities.**

Inclusive recruitment and hiring practices can mitigate barriers and help close the gap in employment rates between people with disabilities and people without disabilities. Companies were

asked about eight promising recruitment and hiring practices. The vast majority of companies (91.6%) said that they have interview locations that are accessible to all people with disabilities, 80.5 percent provide an opportunity for all job interview candidates to request an accommodation for the interview, and 74.0 percent said that job announcements display non-discrimination/equal opportunity policy. The remaining five practices were implemented by 30 percent or less of companies, including an accessible application process (30.4%), actively recruiting people with disabilities (17.5%), developing partnerships with organizations to recruit people with disabilities (16.8%), articulating measurable goals for hiring people with disabilities (10.5%), and designating a dedicated recruiter for hiring people with disabilities (4.2%).

- **Companies implemented more practices to retain and advance people with disabilities than they did to recruit and hire people with disabilities. Many of these practices appear to benefit all employees rather than focus only on employees with disabilities.**

In general, practices that could help to retain or advance people with disabilities were more often implemented by companies than practices to recruit and hire people with disabilities. Among the eight practices focusing on retention and advancement, six were implemented by more than half of the companies surveyed. In contrast, only three of the eight recruitment and hiring practices were implemented by more than half of companies. Among all companies, 82.9 percent said that they had a process for people with disabilities to voluntarily and confidentially disclose that they have a disability; 73.3 percent had stay-at-work/return-to-work programs or policies; 69.2 percent had workplace flexibility programs such as flextime or telecommuting; 64.7 percent used task shifting; 59.6 percent offered job reassignments; and 51.7 percent offered disability awareness or sensitivity training. Only 28.6 percent articulated measurable goals for retaining or advancing people with disabilities, and only 4.7 percent offered a disability employee resource or affinity group.

- **Several disability inclusive practices were associated with an increased likelihood of hiring, retaining, and promoting people with disabilities. However, there was a mismatch between the practices implemented by companies and the practices that appeared to be effective. Some of the practices most strongly related to hiring were not likely to be implemented by companies. At the same time, some of the practices that were unrelated to hiring were implemented by the majority of companies.**

Logistic regression analysis revealed that, controlling for company characteristics, five of eight recruitment and hiring practices significantly increased the likelihood that a company hired people with disabilities in the past year. These included having measurable goals for hiring people with

disabilities, partnerships with organizations, accessible interview locations, active recruitment of people with disabilities, and an accessible online application. These practices increased the odds of hiring a person with a disability from between 1.6 and 3.2 depending on the practice. Only one of the practices that was related to hiring—accessible interview locations—was implemented by most companies. Non-discrimination/equal opportunity policy in job announcements, interview accommodations, and a dedicated recruiter were not significantly related to hiring a person with a disability. Non-discrimination/equal opportunity policy in job announcements and interview accommodations were implemented by most companies.

Five of eight retention and advancement practices significantly increased the likelihood of retention success with people with disabilities hired in the past year or promotion of people with disabilities. These included a disability employee resource or affinity group, voluntary self-disclosure, workplace flexibility programs, stay-at-work/return-to-work programs, and job reassignments.

- **Federal contractors were more likely than other companies to implement disability inclusive practices.**

In March 2013, DOL implemented changes to Section 503 of the Rehabilitation Act, as amended, which requires federal contractors to take affirmative action to hire people with disabilities and collect data to monitor the effectiveness of outreach and recruitment efforts. Specifically, contractors are required to have a 7 percent utilization goal and keep track of the number of people with disabilities who apply for jobs and who are hired. Taking into account other company characteristics, federal contractors were significantly more likely to implement six of eight disability inclusive recruitment and hiring practices. However, inclusive practices are not universally implemented by federal contractors. Less than half of federal contractors reported implementing five of eight inclusive recruitment and hiring practices. In addition, more than half (55 percent) of federal contractors reported that less than 5 percent of their workforces consisted of people with disabilities, suggesting that there is still considerable progress to be made.

Conclusions

Overall, the survey indicates that a majority of companies view benefits to hiring people with disabilities, and some have increased efforts to recruit and hire people with disabilities as the labor market has tightened. The survey points to the following conclusions:

1. There has been some progress in employer efforts to recruit and hire people with disabilities in the last decade, especially among large companies.

2. Companies are implementing some inclusive practices near universally. However, the practices with the most potential for increasing employment of people with disabilities based on logistic regression analyses predicting hiring are not implemented as frequently.

3. Net of other company characteristics, federal contractors were more likely to be implementing many inclusive practices.

Research continues to demonstrate that people with disabilities are underrepresented in the workforce yet want to work. People with disabilities face economic disadvantages including lower employment and lower earnings. In March 2019, the labor force participation rate of people with disabilities age 16 and older was 21.5 percent as compared to 68.5 percent for people without disabilities. Additionally, the unemployment rate for people with disabilities was 7.9 percent, which is about twice the unemployment rate (3.8%) of those without disabilities (Bureau of Labor Statistics, 2019b). People with disabilities also earn less than people without disabilities. In 2017, the median annual earnings for full-time/full-year workers with disabilities ages 18 to 64 was $40,353 compared to $45,449 for people without disabilities (Houtenville and Boege, 2019).

In a tight labor market such as the one occurring when the 2018 employer survey was conducted, there can be opportunities for individuals with long-standing barriers who are willing to work. Employers also benefit from hiring people with disabilities by increasing their access to a talented pool of potential workers. By continuing to conduct research on demand-side factors that influence the employment of people with disabilities, it may be possible to develop a win-win situation for people with disabilities and employers.

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At Westat, Joseph Gasper served as principal investigator and Martha Palan as project director. Michael Hornbostel oversaw the data collection for the survey. Avni Goksel led the sample design and weighting efforts. Jennifer Kawata provided programming support. Frank Bennici and William Frey reviewed a draft of the report and provided many helpful comments. Donna Bennett coordinated editing and production of the report.

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1. Introduction

1.1 Background

The U.S. Department of Labor's (DOL) Office of Disability Employment Policy (ODEP) has long focused on encouraging private sector employers to hire more people with disabilities. ODEP sponsored two previous projects to understand current issues of disability employment. The first project, the *Survey of Employer Perspectives on the Employment of People with Disabilities*, was a nation-wide telephone survey of senior executives in 12 industry sectors conducted in 2008. The study indicated that less than 20 percent of companies employed people with disabilities and that health care costs, workers compensation costs, and fear of litigation were more likely to be challenges for small and medium-sized companies than for large companies (Domzal, Houtenville, and Sharma, 2008).

In 2015, ODEP published its Employer Engagement Strategy from its second project, based on a marketing framework. The framework includes strategies and tactics that employers can implement to increase the employment and retention of people with disabilities. The Employer Engagement Strategy is predicated on the idea that instead of making the "business case" to employers that hiring people with disabilities has economic benefits, ODEP should make the "marketing case" to overcome cultural stereotypes and barriers to employment expressed by employers. This framework points toward incorporating targeted messages and behavioral insights to address "bottlenecks" within the employment cycle that may inhibit opportunities for people with disabilities. The framework also recommends that messaging be tailored to "segments" of employers with different levels of commitment to employing people with disabilities and to workplace diversity (ODEP, 2015).

In support of ODEP's research objective, the Chief Evaluation Office (CEO) contracted with Westat to conduct a survey to provide a picture of current employer perceptions of their efforts to employ people with disabilities as well as their attitudes toward people with disabilities. The purpose of the survey was to continue to monitor employer efforts to engage people with disabilities and to enhance ODEP's ability to engage employers on how to hire, retain, and promote people with disabilities through its public education campaigns and technical assistance centers and to provide guidance to groups that advocate for employment of people with disabilities.

1.1.1 Summary of Disability Employment Policies

In an effort to address disparities in economic opportunities and outcomes, labor laws exist that prohibit employer discrimination against people with disabilities. The Rehabilitation Act of 1973 (Rehab Act) prohibited programs operated by federal agencies from discriminating based on disability status. Section 503 of the Rehab Act extended prohibition of discrimination to federal contractors and subcontractors (Iyer and Masling, 2015). Additionally, the Americans with Disabilities Act of 1990 prohibits private employers, state and local governments, employment agencies, and labor unions from discriminating against people with disabilities. Beyond this, the Americans with Disabilities Act and the Rehab Act require employers to provide reasonable accommodations for people with disabilities, such as providing or modifying devices; restructuring jobs; offering part-time or modified work schedules; reassigning people with disabilities to vacant positions; adjusting or modifying exams, training materials, or policies; providing readers and interpreters; and making the workplace readily accessible (U.S. Equal Employment Opportunity Commission, 2015). However, disabilities such as epilepsy, diabetes, major depression, bipolar disorder, and major bodily functions, including, but not limited to, functions of the immune system, normal cell growth, and digestive, bowel, bladder, neurological, brain, respiratory, circulatory, endocrine, and reproductive functions were not covered. People with these disabilities had a more difficult time seeking accommodation under the Americans with Disabilities Act until the Amendments Act of 2008 expanded the scope of the definition of disabilities (U.S. Equal Employment Opportunity Commission, n.d.). In 2014, the regulations implementing Section 503 were revised to require government contractors and subcontractors to take affirmative action in the recruitment, hiring, promotion, and retention of people with disabilities (ODEP, n.d.).

Other policies encourage the employment of people with disabilities. For example, the Stephen Beck, Jr., Achieving a Better Life Experience Act of 2014 provides tax breaks to people with disabilities and their families or guardians to help pay disability-related expenses (Carrns, 2016). Employers can also deduct from their taxes some expenses required to make accommodations to their business, as well as tax credits for hiring specific groups, which includes people with disabilities (Employer Assistance and Resource Network, n.d.). The employer may use the benefit if the worker was referred by vocational rehabilitation, or has received Supplemental Security Income in the 60 days before being hired (Internal Revenue Service, 2010).

1.1.2 DOL/ODEP's Role Related to Disability Employment

DOL's ODEP is an assistant secretarial level office tasked with promoting employment of people with disabilities. ODEP is mandated to "…provide leadership, develop policy and initiatives, and award grants furthering the objective of eliminating barriers to the training and employment of people with disabilities".[1]

ODEP works to enhance employment of people with disabilities through a number of initiatives. These initiatives provide employers with technical assistance for their questions and support for integrating people with disabilities into the workplace. For example, the Employer Assistance and Resource Network on Disability Inclusion and the Job Accommodation Network are two of the widely known initiatives. ODEP also sponsors the Campaign for Disability Employment, which distributes public service announcements in the media. ODEP, in collaboration with the Department of Defense, also developed and manages the Workforce Recruitment Program for College Students with Disabilities, which is a recruitment and referral program that connects federal and private-sector employers nationwide with highly motivated college students and recent graduates with disabilities who are eager to demonstrate their abilities in the workplace through summer or permanent jobs.

1.1.3 Changes in Policies and Economic Context Over the Past Decade

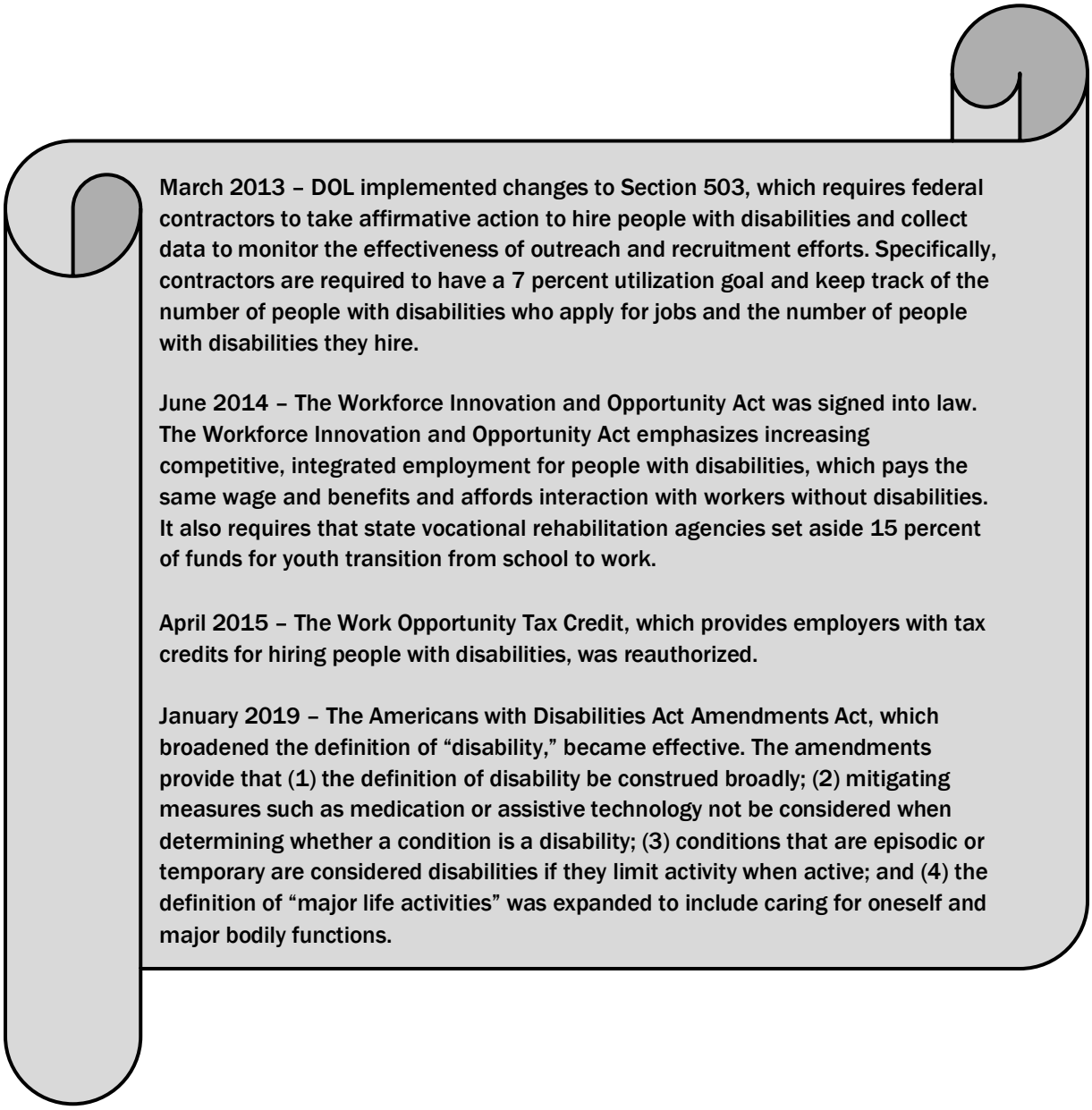
This report presents results from a survey of companies conducted between July and October 2018. The survey was similar to work done for ODEP by Domzal, Houtenville, and Sharma (2008), which looked at perceptions of employers regarding the hiring, retention, and promotion of people with disabilities. The 2008 survey emphasized current attitudes and practices of employers in 12 industry sectors, including some high-growth industries as projected by the Bureau of Labor Statistics and three company size groups. That research found the top five major areas of concern regarding hiring of people with disabilities were perceptions that people with disabilities were not able to handle the nature of the work, unknown cost of accommodations for workers with disabilities, lack of qualified applicants with disabilities, the actual cost of accommodations for people with disabilities, and concern for rising premiums of worker compensation programs.

[1] https://www.congress.gov/bill/114th-congress/house-bill/2029/text

In the decade that passed between the fielding of the two surveys, labor markets changed, including an aging to the workforce and changes in the growth and decline of industries. The most significant event was the Great Recession, which occurred from December 2007 through September 2009 and resulted in the loss of 8.1 million jobs, peaking at 779,000 jobs lost in the month of January 2009 alone (Fogg, Harrington, and McMahon, 2010). When the 2008 survey was fielded in calendar year 2008, the unemployment rate was in the process of rising from 4.6 percent in December 2007 to 9.5 percent in June 2009 (Bureau of Labor Statistics, 2009); when the 2018 survey was fielded in calendar year 2018, the unemployment rate was below 4 percent.

People with disabilities made substantial gains in the labor market in the intervening years, but still face economic disadvantages including lower employment and lower earnings. In March 2019, the labor force participation rate of people with disabilities age 16 and older was 21.5 percent versus 68.5 percent for people without disabilities. People with disabilities also earn less than people without disabilities. In 2017, the median annual earnings for full-time/full-year workers with disabilities ages 18 to 64 was $40,353 compared to $45,449 for people without disabilities (Houtenville and Boege, 2019). However, among workers with similar work schedules and in the same occupations, there are few differences in earnings between people with disabilities and people without disabilities, suggesting that much of the earnings disparity is due to the fact that people with disabilities work less than full-time and concentrate in certain jobs (Cheeseman and Taylor, 2019).Additionally, the unemployment rate for people with disabilities was 7.9 percent, about twice the unemployment rate (3.8%) of those without disabilities, but the lowest it had been since the government began tracking it 12 years ago and down from a high of 15 percent in 2011, when the nation was grappling with the fallout of the Great Recession. In a tight labor market, employers may be more willing to consider groups which have been traditionally overlooked, such as people with disabilities, to fill job positions (Bureau of Labor Statistics, 2019b). Between the two survey fielding time periods, there were also policy changes that were intended to impact the employment of people with disabilities. These recent policy changes are highlighted in Figure 1-1 and provide additional context for interpreting the results of the survey.

Figure 1-1. Recent policy changes impacting the employment of people with disabilities



1.2 Purpose of Study

The survey conducted in 2008 was the first attempt to conduct a nation-wide study of employer perspectives and practices related to disability employment. The purpose of the 2018 survey was to provide updated information on employer perspectives and practices to assess the possible effects of major policy changes. This 2018 *Survey of Employer Policies on the Employment of People with Disabilities* provided employer perceptions of their efforts to employ people with disabilities. ODEP has the

ability to reach out to employers through its public education campaigns and technical assistance centers, as well as engage the business community directly. This information will help ODEP formulate targeted strategies and policies for increasing employment opportunities for people with disabilities.

2. Methodology

The target population for the survey included all companies in 12 industries in the United States with at least five employees.[2] The sampling frame for the survey was the Duns Market Identifiers File maintained by Dun & Bradstreet. Firms rather than establishments were sampled because disability policies are typically made at the firm level. Therefore, only the *headquarters* of companies that have multiple branches and *single location companies* (a business establishment with no branches or subsidiaries reporting to it) were sampled.

The survey employed a stratified random sample design. The sample was obtained by drawing an equal probability sample of companies within each of 48 strata defined by cross-classification of 12 industry sectors and 4 company size classes. The 4 size classes were based on the total number of employees of the company: small (5-14 employees), medium (15-249 employees), large (250-999 employees), and very large (1,000 or more employees). All companies were selected with equal probability within each stratum, and large and very large companies were oversampled. Sampling weights adjust for the different sampling rates across the strata as well as nonresponse.

Survey data collection began the first week of July 2018 and continued through October 2018. The survey was conducted using computer-assisted telephone interviewing. The senior executive who was most knowledgeable about disability hiring was the intended target of the survey. In large companies, the survey was often referred to Human Resources for responses. Large companies often have Human Resources employees who are responsible for recruiting employees with disabilities and tracking accommodations made for employees. Surveys were completed with 2,023 respondents. The response rate was 17.3 percent (using American Association of Public Opinion Research response rate 3, see Appendix A, section A.3).

To develop the survey instrument, we conducted an exhaustive literature review of previous employer surveys to identify questions related to employer attitudes and practices of interest to ODEP. A few select items from the 2008 survey were included to examine changes over time. Feedback on the survey was gathered from ODEP and the study's technical working group. The

[2] All North American Industry Classification System 2 digit industry sector codes are included with the exception of the following three industry sectors: 11: Agriculture, Forestry, Fishing and Hunting; 21: Mining, Quarrying, and Oil and Gas Extraction; and 22: Utilities.

survey was pretested with nine companies. Feedback from the stakeholders and pretest was used to refine the instrument. The interviewer provided a definition of disability so that respondents understood who a person with a disability might be.

> Under the Americans with Disabilities Act, an individual with a disability is defined as a person who (1) has a physical or mental impairment that substantially limits one or more major life activities; (2) has a record of such an impairment; or (3) is regarded as having such an impairment.

The study also included in-depth interviews with executives in 20 companies that already responded to the survey. In consultation with ODEP, we purposely selected these companies (based on their survey responses) based on success in the hiring and retaining employees with disabilities so we could understand the actual practices, successes, and challenges of disability employment. Specifically, companies were selected if they currently employed people with disabilities and if they recently hired, retained, or advanced people with disabilities.

Appendix A describes the overall survey methodology in greater detail, including the sample design, data collection procedures, response rates, nonresponse bias analysis, weighting, and variance estimation. The advance letter and questionnaire are contained in Appendix C.

The analyses are descriptive and consist of frequencies and cross-tabulations and do not imply causal relationships among the variables examined. Results are presented by company size and industry. For most analyses, large (250-999 employees) and very large (1,000 or more employees) are collapsed into a single group consisting of companies with 250 or more employees to facilitate comparisons to the 2008 survey, which used only 3 company size categories. The 12 industry sectors are collapsed to follow the super-sectors of the North American Industry Classification System: goods-producing, service-providing, and public administration. Goods-producing industries include construction and manufacturing. Service-providing industries include wholesale trade/transportation/warehousing, retail trade, information, finance, professional services, education, health services, leisure/hospitality, and other services. Public administration consists of state and local government agencies that administer, oversee, and manage public programs and have executive, legislative, or judicial authority over other institutions within a given area. Only differences that are statistically significant at 5 percent are noted in tables and discussed in the text. A Rao-Scott chi-square test, which is a design-adjusted version of the Pearson chi-square test, was used to test for differences by company size and

industry (Rao and Scott, 1984). All analyses use weighted data to account for the complex sampling design and nonresponse.

Results are sometimes also presented by federal contractor status. Federal contractor status was ascertained by self-report of the respondent. Appendix F provides the results of a comparison of self-reported federal contractor status to government data.

2.1 Characteristics of the Sample

Table 2-1 shows the company and respondent characteristics for the weighted survey respondents. Where available, estimates are shown for the 2008 survey. The differences in company size, industry, and company structure (headquarters versus single location) were significant between the two years. However, these differences are small and are expected due to the large sample sizes and small standard errors.[3]

Table 2-1. Characteristics of companies and respondents

Characteristic	2008 %	2018 %
Company size[a]		
Small (5-14)	50.6	49.2
Medium (15-249)	41.1	45.6
Large (250 or more)	8.3	5.3
Industry[a]		
Goods-producing	17.4	16.0
Service-providing	80.8	82.0
Public administration	1.9	2.0
Federal contractor		
Yes	N/A	6.7
No	N/A	91.9
Don't know/refused	N/A	1.4
Company structure[a]		
Single location company	89.5	86.6
Headquarters	10.5	13.4
Subsidiary		
Yes	N/A	4.1
No	N/A	95.8

[3] To address potential undercoverage bias in the Duns Market Identifiers file in 2008 and enable valid comparisons over time, the 2008 sampling weights were poststratified based on the industry by size marginal totals in the 2018 Duns Market Identifiers file. In addition, we conducted analysis of comparisons over time using regression analysis to adjust for company size, industry, and structure (headquarters versus single location company). The results from this analysis did not differ from the simple comparisons over time. Details on the weighting methodology are in Appendix A.

Table 2-1. Characteristics of companies and respondents (continued)

Characteristic	2008 %	2018 %
Census region		
Northeast	N/A	19.0
Central	N/A	25.5
Southeast	N/A	34.4
West	N/A	21.1
Plans for workforce in next 12 months		
We plan to increase the size of our workforce	N/A	31.6
We have no plans to increase or decrease the size of our workforce	N/A	64.0
We plan to reduce the size of our workforce	N/A	3.6
Don't know/refused	N/A	0.8
Years at current employer		
Less than 5	33.6	30.5
6 to 10	21.0	16.4
11 to 20	25.0	24.2
More than 20	20.0	28.8
Don't know/refused	0.4	0.1
Regularly interacts with someone with a disability inside the work environment		
Yes	N/A	59.9
No	N/A	37.8
Don't know/refused	N/A	2.3
Regularly interacts with someone with a disability outside the work environment		
Yes	N/A	81.2
No	N/A	18.0
Don't know/refused	N/A	0.8

Source: 2008 survey Q1, Q2, Q3, Q4, Q7; 2018 survey Q1, Q2, Q3, Q6, Q9, Q10, Q11, Q14, Q15

2008 N = 3,797; 2018 N = 2,023.

Cells with "N/A" indicate that data were not available for 2008.

[a] Chi-square test for differences between 2008 and 2018 is significant at $p < .05$.

3. Results

This chapter presents the results of the analysis. Section 3.1 addresses information on disability employment—employment, recruitment, and hiring of people with disabilities. Section 3.2 presents information on employer attitudes toward hiring people with disabilities, including benefits and concerns. Section 3.3 addresses employer practices and policies for recruitment, hiring, retention, and advancement. Finally, Section 3.4 presents information on employer efforts to recruit and hire veterans—a group that has both similarities and differences to people with disabilities. This chapter also presents results of the analysis of the qualitative interviews; these results are organized by topic area and are integrated into the results of the survey.

As noted in Chapter 2, the statistics in this report are calculated using sample weights. A sample weight depicts the number of companies a sampled company represents. In other words, the 2,023 companies in the sample represent 2,007,574 companies. In the tables, responses of "don't know" and "refused" are treated as valid responses and included in denominators when calculating percentages.[4] The supplementary statistical tables in Appendix B contain corresponding standard errors and sample sizes for all estimates.

3.1 Employment of People with Disabilities

Passed by Congress in 1990, the Americans with Disabilities Act prohibits discrimination of people on the basis of disability in employment and other areas of public life. Since the passage of the Americans with Disabilities Act , there have been considerable policies and programs at the federal and state levels designed to promote inclusion and improvement in standing of people with disabilities in the workforce. In addition, through its technical assistance and policy development centers, including the Employer Assistance and Resource Network and Job Accommodation Network, ODEP helps employers interested in hiring people with disabilities. Several recent federal

[4] We included responses of "don't know" in the denominator because they are valid responses. A respondent may legitimately not know whether they have any employees with disabilities or may not have an opinion about benefits or concerns in hiring. Excluding don't know responses would overestimate percentages. There were very few refusal responses. The refusal rates for all but one question were well under 1 percent.

initiatives seek to encourage employers to recruit and hire people with disabilities, including changes to Section 503 and the reauthorization of the Work Opportunity Tax Credit.

In a tight labor market, employers may consider all available job candidates, including those with disabilities. Employment metrics show that while people with disabilities have made progress in the labor market in recent years, the gains have slowed in 2019 (Kessler Foundation, 2019). Both the 2008 and 2018 surveys included questions about whether companies had any employees with disabilities and efforts to recruit and hire people with disabilities. This allows for a comparison of efforts to recruit and hire people with disabilities when the nation was heading into the Great Recession in 2008 and the current state of full employment. The 2018 survey also asked about efforts to track the number of employees with disabilities.

3.1.1 Current Employment

The survey asked companies, "To your knowledge, do any of your company's current employees have a physical or mental disability?" The interviewer provided a definition of disability so that respondents understood who a person with a disability might be.

> Under the Americans with Disabilities Act, an individual with a disability is defined as a person who (1) has a physical or mental impairment that substantially limits one or more major life activities; (2) has a record of such an impairment; or (3) is regarded as having such an impairment.

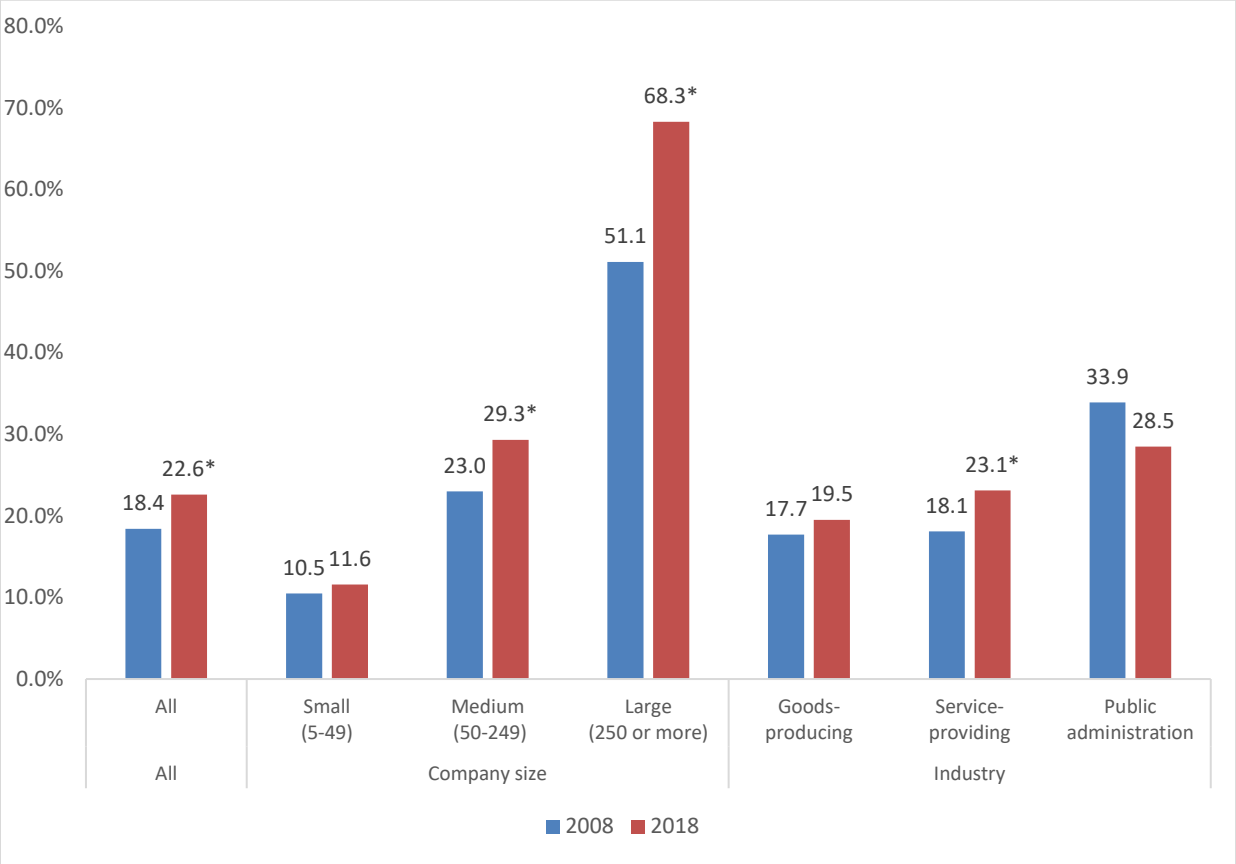
Figure 3-1 shows the percentage of companies that currently employ people with disabilities compared to the estimate from the 2008 survey. The results are presented by company size and industry. Among all companies, 22.6 percent reported employing people with disabilities in 2018. These data suggest a more than 4 percentage point increase from 18.4 percent in 2008. The difference is statistically significant.

As shown in Figure 3-1, in 2018, among small companies (5 to 49 employees), 11.6 percent reported employing people with disabilities, while 29.3 percent of medium-sized companies (50 to 249 employees) and 68.3 percent of large companies (250 or more employees) reported employing people with disabilities. Differences by company size were significant. It is not surprising that companies with more employees are more likely to employ people with disabilities. These companies simply have more employment opportunities and may be more likely to commit to a diverse

workplace. They also are more likely to have resources to make reasonable accommodations. The percentage of companies employing people with disabilities increased significantly for medium-sized companies (23.0% to 29.3%) and large companies (51.1% to 68.3%). While there no significant increase was observed for small companies, the 95 percent confidence interval for the change over time for small companies was -2.8 percent to 5.0 percent, which still includes a substantively important difference. The lack of a significant change in small companies could potentially be due to large sampling error. The confidence intervals for the change over time for medium-sized and large companies were 1.2 to 11.3 and 5.3 to 29.3 percent, respectively. Appendix H provides the point estimates and confidence intervals for changes over time for the percentage of companies that employ people with disabilities, actively recruit people with disabilities, and hired people with disabilities in the past 12 months.

There were no significant differences by industry in the percentage of companies employing people with disabilities. The percentage of companies employing people with disabilities increased significantly in service-providing industries from 18.1 to 23.1 percent but did not change in good-producing or public administration organizations.

Figure 3-1. Percentage of companies that employed people with disabilities, by size and industry



Source: 2008 survey Q10; 2018 survey Q16

*** Chi-square test for differences between years is significant at p < .05.**

In 2018, chi-square test for difference by company size is significant at p < .05.

2018 N=2,023 companies; 2008 N=3,797 companies.

Table 3-1 shows the percentage of companies that employ people with disabilities by detailed industry. Companies in education services, leisure and hospitality, information, and public administration were the most likely to employ people with disabilities, whereas companies in construction, business services, and wholesale trade/transportation/warehousing were least likely to employ people with disabilities.

Table 3-1. Percentage of companies that employed people with disabilities, by detailed industry

Industry	%
All companies	22.6
Construction	15.2
Manufacturing	24.3
Wholesale trade, transportation, and warehousing	16.9
Retail trade	20.4
Information	28.5
Financial activities	17.6
Professional and business services	16.6
Educational services	38.1
Health care and social assistance	22.2
Leisure and hospitality	31.0
Personal services	20.0
Public administration	28.5

Source: 2018 survey Q16

N=2,023 companies.

Executives that said that their company had at least one current employee with a disability were asked what percentage of their employees have disabilities. Table 3-2 shows that the modal proportion is 1 to 2 percent, which was well below the 10.3 percent of the U.S. population ages 18-64 that has a disability (Lauer and Houtenville, 2019). It is important to note that companies could only report on employees with visiable disabilities such as those using wheel chairs, using white cane or service animals, or those whose disabilities have been disclosed. There were significant differences by company size. Among companies that employed people with disabilities, small companies were more likely to have a higher percentage of people with disabilities. This is likely due to the fact that small companies have fewer employees. It would be statistically unlikely for a large company to have a high percentage of people with disabilities simply because there are so many employees. Overall, 4.8 percent of executives did not know the percentage of their employees with disabilities. The percentage of executives who did not know was larger in large companies and in public administration organizations. This finding seems counterintuitive as large companies are more likely to track the number of employees with disabilities but may be explained by the fact that the information may not have been readily available to respondents in large companies at the time of the survey.

Among companies that employed people with disabilities, there was no difference in the percentage of employees with a disability between federal contractors and non-contractors. As mentioned,

Section 503 requires that federal contractors have a representation goal of 7 percent for people with disabilities. None of the survey response options included 7 percent as a lower bound. However, only 36.5 percent of federal contractors reported that 5 percent or more of their workforces consisted of people with disabilities compared to 33.9 percent of non-federal contractors. This suggests that there is considerable progress to be made in meeting the 7 percent goal.

It is important to note that because the number of companies that reported having any employees with disabilities is small (702 companies), the estimates of the percentage of employees with disabilities are not very precise.

Table 3-2. Among companies that employed people with disabilities, percentage of employees with a disability, by size and industry

Percent of employees with disabilities	All	Company size			Industry			Federal contractor	
		Small	Medium	Large	Goods-producing	Service-providing	Public administration	Yes	No
Less than 1%	21.3	16.9	21.9	25.8	24.0	20.7	26.3	20.2	21.6
1% or 2%	26.1	10.7	34.0	21.4	28.0	25.8	27.3	25.4	26.5
3% to 4%	13.8	3.2	17.4	17.2	17.3	13.5	4.3	9.6	13.8
5% to 9%	17.6	17.6	18.0	16.0	12.2	18.5	15.8	12.8	18.5
10% or more	16.4	49.3	5.4	5.1	14.8	17.0	6.1	23.7	15.4
Don't know/refused	4.8	2.2	3.3	14.6	3.8	4.5	20.2	8.3	4.3

Source: 2018 survey Q17

Chi-square test for difference by company sizes is significant at $p < .05$.

For analyses by company size and industry, N=702 companies that employed people with disabilities. For analysis by federal contractor status, N=681 companies. Excludes 21 companies that responded don't know or refused to Q10 on federal contractor status.

3.1.2 Tracking the Number of Employees with Disabilities

There are various data sources a company may use when attempting to track the number of employees with disabilities to support diversity and inclusion efforts.

As discussed, Section 503 requires federal contractors to collect data on the number of job applicants and the number of employees with disabilities to monitor progress toward achieving equal opportunity for people with disabilities. This is often referred to as self-identification. Federal contractors use *Form CC-305 Voluntary Self-Identification of Disability* to collect this data. However, employers that are not federal contractors but are committed to increasing diversity and inclusion in the workplace may also track the number of employees with disabilities. Employers invite applicants and employees to voluntarily self-identify using a form. Although this data is often trackable to the

applicant or employee, data collected on these forms must be kept confidential, should only be used for statistical purposes, and viewed in the aggregate.

Companies may also collect data by asking employees to voluntarily self-identify on employee engagement surveys. These surveys are utilized to understand the overall climate of business. Often companies will make employee engagement surveys anonymous to increase participation. Data collected from these surveys should be confidential and viewed in the aggregate.

Affirmative action programs are also a source of disability demographic data. These affirmative action programs address various areas, including recruitment, mentoring, retention and training. For example, a company may ask applicants to voluntarily disclose their disability to participate in a hiring program designed to recruit people with disabilities. This data can be utilized to determine the successfulness of various affirmative action programs and supplement other data to provide information on the number of employees with disabilities at a particular company.

Lastly, companies may keep track of number of employees who request a reasonable accommodation. Although an employee may disclose their disability to request an accommodation, they cannot be required to self-identify on the forms discussed above. This data can be extremely valuable in helping businesses plan for the needs of their workforce.

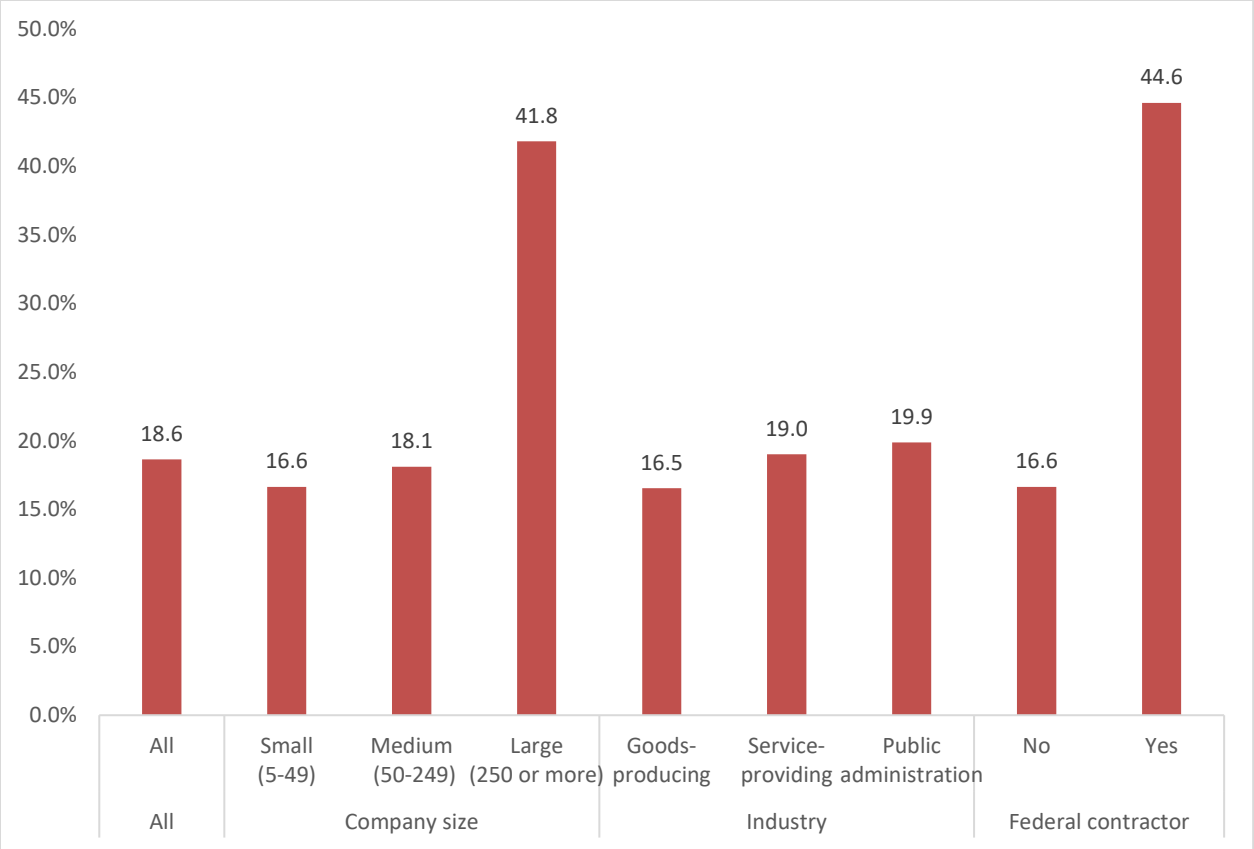
While some employers worry that collecting disability demographic data may make them vulnerable to litigation on the charge of employment discrimination, the benefits to employers range from helping employees request a reasonable accommodations to creating a workplace climate of inclusion (Von Schrader, Malzer, and Bruyere, 2014).

All executives surveyed were asked whether their company tracked the number of employees with disabilities. Figure 3-2 shows that less than one in five companies (18.6%) tracked the number of employees with disabilities. Differences by company size and industry were significant. The percentage of companies that tracked the number of employees with disabilities was higher among large companies (41.8%) than among small companies (16.6%) and medium-size companies (18.1%). There was little difference between small and medium-sized companies. Forty-five percent of federal contractors reported tracking the number of employees with disabilities compared to only 16.6 percent of non-contractors. There was no difference in the percentage of companies that tracked the number of employees with disabilities by industry.

3.1.3 Recruitment

The survey asked all companies, "Does your company actively recruit job applicants who are people with disabilities?" Figure 3-3 provides the percentage of companies that actively recruit applicants with disabilities. These statistics are provided for all companies, by company size and industry. The figure shows that 17.5 percent of companies reported that they actively recruit people with disabilities. This is an increase from 13.5 percent in 2008. This difference is statistically significant.

Figure 3-2. Percentage of companies that track the number of employees with disabilities, by size and industry



Source: 2018 survey Q18

Chi-square test for differences by company size and federal contractor are significant at p <.05.

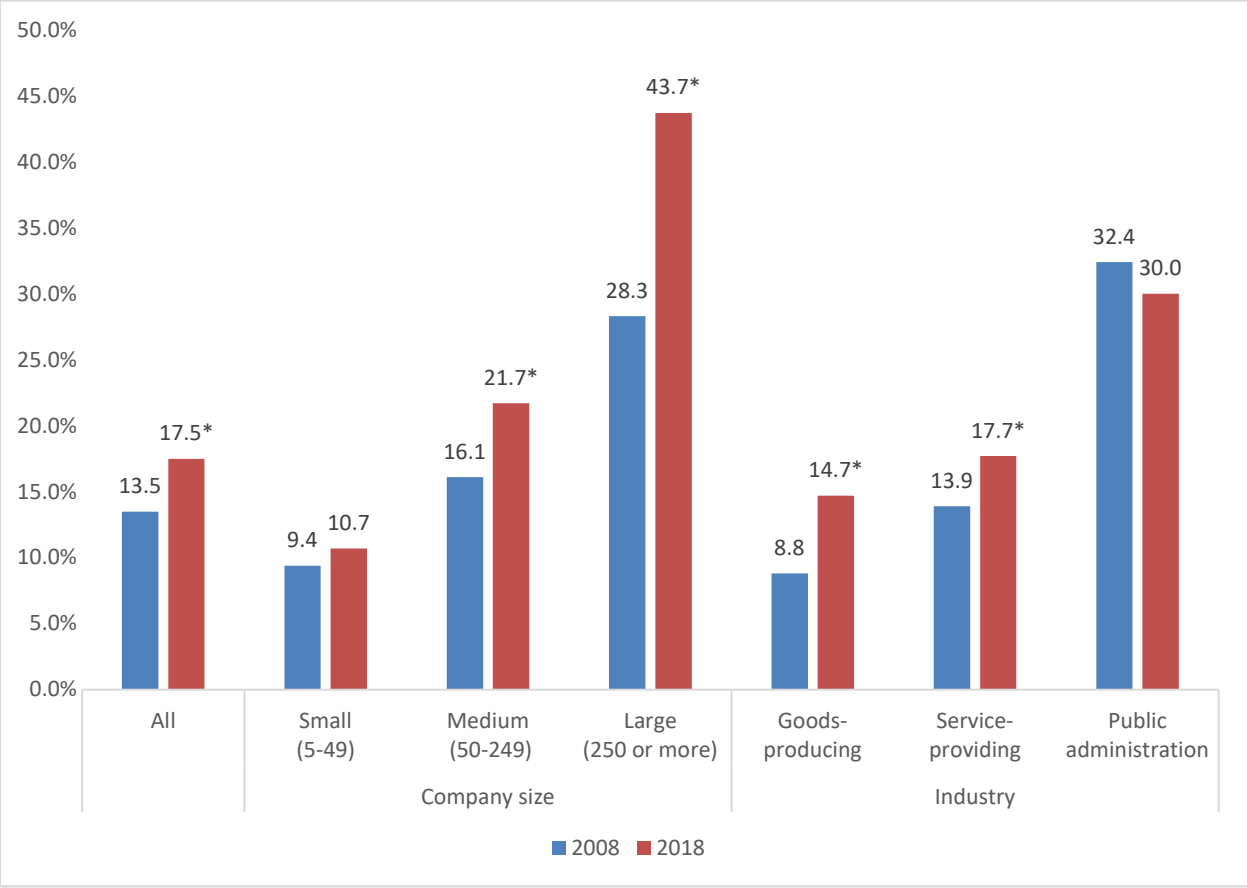
For analyses by company size and industry N=2,023 companies. For analysis by federal contractor status, N=1,984 companies. Excludes 39 companies that responded don't know or refused to Q10 on federal contractor status.

In 2018, large companies were more likely to actively recruit people with disabilities (43.7%) than medium-sized (21.7%) or small companies (10.7%). While the percentage of medium-sized companies that recruit people with disabilities increased 5.6 percent points and the percentage of

large companies that recruit nearly doubled with about a 15 percentage point increase. Both of these changes were significant. While there was no change in small companies, the confidence interval for the change was -25 to 5.2 percent. The confidence intervals for medium-sized and large companies were 1.2 to 10.0 percent and 3.9 to 26.9, respectively.

Public administration employers are more likely to actively recruit than their private sector counterparts. Thirty percent of public administration employers actively recruited compared to 17.7 percent of service-providing employers and 14.7 percent of goods-producing employers. The percentage of companies that actively recruit increased significantly in the goods-producing and service-providing sectors.

Figure 3-3. Percentage of companies that actively recruit people with disabilities, by size and industry



Source: 2008 survey Q14; 2018 survey Q22

* Chi-square test for differences between years is significant at $p < .05$.

In 2018, chi-square test for differences by company size and industry are significant at $p < .05$.

2018 N=2,023 companies; 2008 N=3,797 companies.

Recruiting Strategies

There is a wealth of resources available to help companies find qualified job candidates with disabilities. Executives in companies that actively recruited people with disabilities were asked about the strategies they used to recruit.[5] Table 3-3 ranks the strategies cited by all companies. Companies tended to use passive recruiting strategies aimed at broad groups as opposed to active strategies that involve working with individual organizations or targeting people with disabilities directly. The most frequently cited recruiting strategy was contacting college and university career centers—70.7 percent of companies that recruited people with disabilities used this strategy. This suggests that companies that recruit people with disabilities may be interested in hiring youth with disabilities who are college graduates. Because only 19 percent of students in postsecondary education have disabilities (U.S. Department of Education, 2017), these employers that focus on college and university career centers may be missing a potentially large talent pool of people with disabilities. More than half of companies (51.3%) used postings at a job service or workforce employment center. The rest of the recruiting strategies were used by less than half of companies. Establishing summer recruiting programs was cited by only 13.5 percent of companies despite the fact that internships have been shown to increase the likelihood of a company hiring people with disabilities (Erickson et al., 2014).

Table 3-3. Among companies that actively recruit people with disabilities, percentage of companies that use different strategies to recruit people with disabilities

Recruitment strategy	All	
	%	Rank
Contacting college and university career centers when vacancies arise	70.7	1
Postings at job service or workforce employment center	51.3	2
Partnerships with disability-related advocacy organizations	39.4	3
Postings at disability-related publications or websites	34.7	4
Postings at Department of Vocational Rehabilitation	18.5	5
Postings or tables at disability-related job fairs	15.1	6
Establishing summer internship and mentoring programs	13.5	7

Source: 2018 survey Q23

N=531 (17.5%) companies that actively recruit people with disabilities.

[5] While a similar question was asked in the 2008 survey, the estimates cannot be compared because of changes in the wording of some of the items and question administration. In 2008, response choices were not read aloud by interviewers. In contrast, in 2018, response choices were read aloud, and respondents were asked to select one or more.

Companies that participated in qualitative interviews mentioned several strategies that they perceived as effective for recruiting people with disabilities, including partnering with organizations that provide services to people with disabilities, job fairs that target people with disabilities, working with disability recruiters, large web-based applicant systems, and word of mouth. Large and medium-sized companies had a more formal recruitment strategy, whereas the small companies relied more on word-of-mouth to find qualified applicants with disabilities. Also, large- and medium-sized companies said that their recruitment efforts were guided by an affirmative action plan or an equal opportunity policy and emphasized the importance of communicating recruitment goals to managers in order to ensure achievement of the goals.

Reasons for not Recruiting People with Disabilities

Executives in companies that did not actively recruit people with disabilities were asked about the reasons why their company did not recruit these potential employees. Table 3-4 shows the reasons. The most common reason cited by all those surveyed was an absence of job openings, reported for 56.9 percent of companies. Beyond lack of job openings, however, executives surveyed cited a lack of knowledge about how to actively recruit people with disabilities (34.7%) and architectural barriers or lack of special equipment (26.3%). Taking too much time or costing too much money were each cited by less than 5 percent of the executives surveyed.

Table 3-4. Among companies that do not actively recruit people with disabilities, percentage of companies reporting different reasons for not recruiting

Reason for not recruiting people with disabilities	All	
	%	Rank
Absence of job openings	56.9	1
Not sure how to actively recruit people with disabilities	34.7	2
Architectural barriers or lack of special equipment	26.3	3
Takes too much time	4.5	4
Cost too much money to hire people with disabilities	3.5	5

Source: 2018 survey Q24

N=1,492 companies that did not actively recruit people with disabilities.

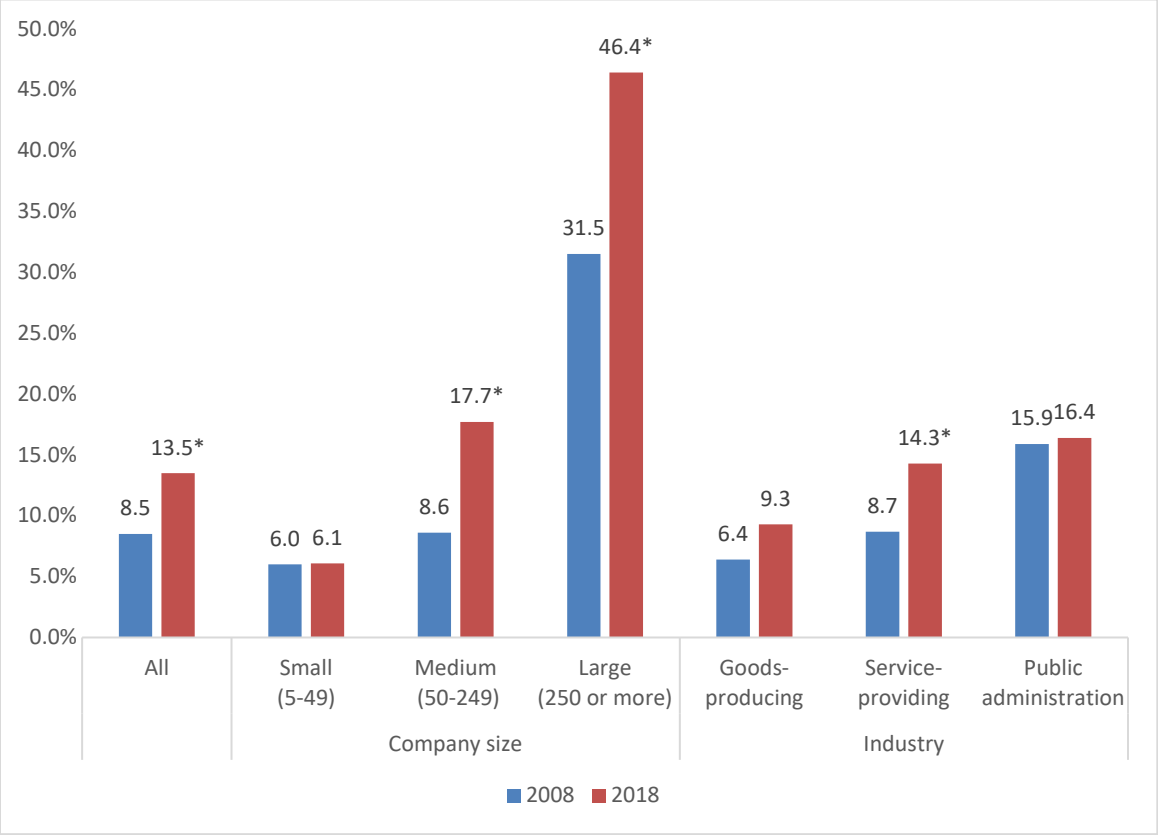
The finding that the absence of job openings was the top reason reported by companies seems inconsistent with the fact that in August 2018, while the survey was in the field, there were a record 7.1 million job openings in the United States (Bureau of Labor Statistics, 2018). Moreover, among companies that cited the absence of job openings, 17 percent indicated that they planned to increase

the size of their workforce in the next 12 months. Of course, since the survey did not collect information on the fit between the job openings and the skills and abilities of the pool of people with disabilities, it is uncertain whether employers should consider people with disabilities. As shown later in this report, many employers harbor concerns about people with disabilities, and these concerns are more prevalent among employers who do not actively recruit people with disabilities.

3.1.4 Hiring

Figure 3-4 provides the percentage of companies that hired people with disabilities in the past 12 months. The data are provided for all companies and by company size and industry. Figure 3-3 shows that in 2018, 13.5 percent of companies reported having hired people with disabilities in the past 12 months. This was a statistically significant increase from 8.5 percent in 2008. As with employing and recruiting people with disabilities, large companies are more likely to report having hired people with disabilities in the past 12 months (46.4%) compared to medium-sized (17.7%) and small (6.1%) companies. Increases in the percentage of companies that hired people with disabilities in the past 12 months occurred for medium-sized and large companies and for companies in service-providing industries. The confidence intervals for the change over time for small, medium-sized, and large companies were -2.9 to 3.2, 5.0 to 13.3, and 2.3 to 27.6, respectively.

Figure 3-4. Percentage of companies that hired people with disabilities in the past 12 months, by size and industry



Source: 2008 survey Q12; 2018 survey Q19

*** Chi-square test for differences between years is significant at p < .05.**

In 2018, chi-square test for differences by company size and industry are significant at p < .05.

2018 N=2,023 companies; 2008 N=3,797 companies.

3.2 Employer Attitudes

Employer support is critical for closing the employment gap between people with disabilities and people without disabilities. Considerable research has documented that employers view both benefits and concerns in hiring people with disabilities (Burke et al., 2013; Karpur VanLooy, and Bruyere, 2014; Unger, 2002). When employers cite benefits in hiring people with disabilities, they are not always related to actual hiring, and corporate responsibility tends to be mentioned more often than personal contributions of people with disabilities (Luecking, 2008). Employer concerns in hiring people with disabilities that are frequently mentioned include work productivity, costs of accommodation, absenteeism, turnover, increased supervision time, negative reactions of coworkers,

and fear of litigation (Burke et al., 2013; Ju, 2012; Karpur et al., 2014; Kulkarni & Lengnick-Hall, 2014; Unger, 2002).

The "business case" for hiring people with disabilities focuses on the economic cost-benefit to employers (Economic Systems, Inc., 2012). Considerable research shows that workers with disabilities have similar performance and higher retention rates than workers without disabilities and that the costs of accommodation are low (Hindle, Noble, and Phillips, 1999; Hernandez and McDonald, 2010; Nicolas, Kauder, Krepico, and Baker, 2011). In addition, financial incentives exist for employers in the form of tax credits. Federal tax incentives include:

- The ***Work Opportunity Tax Credit*** is a credit available to employers for hiring individuals from target groups who have consistently faced significant barriers to employment, including veterans with disabilities and those who are receiving or have completed vocational rehabilitation services.
- The ***Disabled Access Credit*** provides a credit of up to $5,000 for small businesses that incur expenditures for the purpose of providing access to persons with disabilities.
- The ***Architectural/Transportation Tax Deduction*** provides an annual deduction of up to $15,000 for expenses such as creating accessible parking; installing ramps and curb cuts; making telephones, water fountains and restrooms accessible; and widening walkways. It may also be used for vehicle adaptation.

There is some evidence that employers view the benefits of hiring people with disabilities as outweighing the costs. A study of employers who called the Job Accommodation Network for accommodation information found that most employers who made an accommodation reported no or low cost of the accommodation and multiple direct and indirect benefits (Job Accommodation Network, 2018). However, the business case has been questioned on the grounds that while quantitative data support the economic benefits of hiring people with disabilities and most employers have this information, scant progress has been made toward increasing the employment of people with disabilities.

3.2.1 Benefits

There is a dearth of data at the national level on the extent to which employers believe that there are benefits of hiring people with disabilities. We asked executives about their view of seven potential benefits of hiring people with disabilities. Respondents were asked to provide a yes or no response to each benefit. Table 3-5 ranks the benefits cited by respondents. The results are shown for all companies and by company size and industry. Eighty-six percent of companies cited at least one benefit of hiring people with disabilities. The benefit most frequently cited by respondents was that hiring people with disabilities projects a positive image of the company with prospective customers (72.5%). Companies were also likely to cite projecting a positive image with prospective employees (72.0%) and increasing the pool of qualified candidates (60.8%). Increasing morale (41.3%), reducing legal liability for lack of diversity (32.8%), tax incentives (30.4%), and increasing productivity (18.5%) were less frequently cited as benefits.

Benefits of Hiring People with Disabilities from Survey Data

All companies: >50 percent of companies agreed that hiring projects a positive image with customers and employees and increases the pool of qualified candidates.

Company size: The top three benefits cited were the same regardless of company size. Large companies were more likely to cite benefits than medium or small companies.

Industry: The top three benefits cited were the same regardless of industry. Service-providing and public administration employers were more likely to cite benefits than goods-producing employers.

The relative ranking of the types of benefits is consistent across company size. The top three benefits cited are the same regardless of company size. However, large companies are more likely to cite benefits in general than small and medium-sized companies. There were only two benefits that did not differ significantly by company size—reducing liability for legal issues due to lack of diversity and financial incentives such as tax breaks for accommodation. Many companies do not perceive these as benefits, regardless of size. The average number of benefits cited was 3.3, with large companies citing significantly more benefits than small and medium-sized companies. Large companies cited 4.2 benefits compared to 3.5 and 2.9 for medium- and small-sized companies, respectively.

Table 3-5. Percentage of companies reporting benefits of hiring people with disabilities, by size and industry

Benefit	All		Company size						Industry					
			Small (5-49)		Medium (50-249)		Large (250 or more)		Goods-producing		Service-providing		Public administration	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Projects a positive image with customers[a,b]	72.5	1	66.8	1	77.3	2	83.9	2	62.2	2	74.3	1	80.1	1
Projects a positive image with prospective employees[a,b]	72.0	2	65.2	2	77.4	1	88.7	1	64.7	1	73.3	2	79.2	2
Increases the pool of qualified candidates[a,b]	60.8	3	53.5	3	66.9	3	76.2	3	51.4	3	62.3	3	72.8	3
Increases morale[a,b]	41.3	4	34.5	4	46.1	4	62.8	4	28.8	6	43.6	4	46.2	4
Reduces liability for legal issues related to lack of diversity	32.8	5	30.0	5	34.3	5	46.2	5	30.7	4	33.1	5	37.2	5
Financial incentives such as tax breaks for accommodation	30.4	6	29.9	6	30.5	6	34.5	6	30.1	5	30.9	6	15.0	7
Increases productivity[a,b]	18.5	7	14.7	7	21.5	7	28.0	7	11.7	7	19.7	7	20.8	6
Any benefit[a,b]	85.6		80.3		90.1		96.5		77.9		87.1		87.9	
Number of benefits (mean)[c,d]	3.3		2.9		3.5		4.2		2.8		3.4		3.5	

Source: 2018 survey Q28

N=2,023 companies.

[a] Chi-square test for difference by company size is significant at $p < .05$.

[b] Chi-square test for difference by industry is significant at $p < .05$.

[c] *F*-test for difference by company size is significant at $p < .05$.

[d] *F*-test for difference by industry is significant at $p < .05$.

The relative ranking of benefits is also similar across industries. However, six of the benefits differed significantly by industry with employers in the service-providing and public administration sectors were more likely to cite these benefits compared to employers in the goods-producing sector. Service-providing and public administration employers cited significantly more benefits than goods-producing employers. Service-providing and public administration employers cited 3.4 and 3.5 benefits, respectively, whereas goods-producing employers cited 2.8 benefits.

Data from the in-depth interviews with employers provide more insight into the perceived benefits of hiring people with disabilities from the employer perspective. Ten of twenty interviewees described specific ways in which hiring people with disabilities was viewed as having benefits for the company, people with disabilities, and coworkers. These companies viewed hiring people with disabilities as an ethical business practice. For example, one employer simply said that hiring people with disabilities is the "right thing to do." Four employers noted that many people with disabilities want to work and are committed employees, and that the difficulties they have experienced finding a job made them loyal employees. Another benefit to coworkers cited by interviewees is that people with disabilities bring diverse perspectives to the workplace. For example, one employer described in detail the process through which nondisabled employees benefit: they stated that when people with disabilities perform jobs successfully, it increases acceptance and understanding on the part of coworkers that people with disabilities can make a positive contribution to the workplace. Another employer said that increased soft skills from interacting with coworkers was a benefit to both people with disabilities and coworkers. Among the ten employers that mentioned benefits, all of them said that the benefits of hiring people with disabilities was viewed as

Benefits of hiring people with disabilities from In-Depth Interviews with Employers

Employer 1:

"It's the right thing to do, and we want to make sure that no one is being barred from working for us just because of disability. It's very important to be diverse in the people we bring in because they bring a new perspective, a fresh perspective."

Employer 2:

"We believe that, when people are given a chance, when they've been turned down and had a lot of difficulty being given an opportunity, there's a loyalty that comes with that, and we see that."

Employer 3:

"The more that you expose your workforce to people with disabilities, the more it is accepted."

Employer 4:

"It helps to improve soft skills when you have an employee with a disability, then the other employees learn better soft skills."

outweighing the costs. As one employer noted, *"The value you get back, outweighs the cost [of employing a person with a disability]; it's win-win from the organization's standpoint."*

Relationship of Benefits to Recruitment

Are companies that actively recruit people with disabilities more likely to perceive benefits of hiring people with disabilities? For the analysis, we split the respondents into two groups: those that actively recruit people with disabilities and those that do not. As shown in Table 3-6, the rankings of the benefits were the same for the two groups. Table 3-6 also shows the percentage difference between companies that recruit and companies that do not recruit. Overall, companies that recruit people with disabilities are significantly more likely to report a particular benefit than those that do not recruit. The biggest differences between companies that recruit and those that do not recruit are in the benefits related to increased morale and productivity. Companies that cited increased morale were 25.8 percentage points more likely to recruit and those that cited productivity were 22.3 percentage points more likely to recruit.

Table 3-6. Percentage of companies reporting benefits of hiring people with disabilities, by whether companies actively recruit people with disabilities

			Actively recruits people with disabilities				
	All		Actively recruits		Does not actively recruit		
Benefit	%	Rank	%	Rank	%	Rank	Difference
Projects a positive image with customers[a]	72.5	1	87.3	1	69.7	1	17.6
Projects a positive image with prospective employees[a]	72	2	86.4	2	69	2	17.4
Increases the pool of qualified candidates[a]	60.8	3	75.3	3	57.3	3	18
Increases morale[a]	41.3	4	62.7	4	36.9	4	25.8
Reduces liability for legal issues related to lack of diversity[a]	32.8	5	44.5	5	30.9	5	13.6
Financial incentives such as tax breaks for accommodation[a]	30.4	6	39.2	6	29.3	6	9.9
Increases productivity[a]	18.5	7	36.6	7	14.3	7	22.3

Source: 2018 survey Q22, Q28

N=1,856 companies. Excludes 167 companies that responded don't know or refused to Q22.

[a] Chi-square test for difference by actively recruits is significant at $p < .05$.

3.2.2 Concerns

Concerns in Hiring People with Disabilities from Survey Data

All companies: **>50 percent of companies were concerned about safety of people with disabilities and their coworkers, ability of workers with disabilities to their perform job duties, and absenteeism**

Company size: **Large companies were less likely than small and medium companies to cite concerns**

Industry: **Employers in the goods-producing industry were more likely to cite concerns than those in the service-producing or public administration sectors**

Interviewers read 15 concerns about hiring people with disabilities and asked respondents to indicate how much of a concern each was for their company. Previous research suggests that respondents may be reluctant to express negative attitudes about people with disabilities due to social desirability bias (Kaye et al., 2011). In the hopes of improving responses to these questions, we used "forgiving" wording, a technique for asking sensitive questions in surveys that includes language suggesting that the behavior or attitude is quite common (Tourangeau and Yan, 2007). Specifically, the interviewer read the following statement before asking the series of questions on concerns: "Many employers have concerns about hiring people with disabilities, such as costs of accommodation or absenteeism." The interviewer then asked: "How much of a concern are the following factors to your company in hiring people with disabilities?"

Table 3-7 shows the percentage of companies overall and by company size and industry reporting a concern. Respondents who said that they were "somewhat concerned" or "very concerned" were considered to be concerned. Eighty-seven percent of employers reported at least one concern about hiring people with disabilities. Safety on the job of people with disabilities and their coworkers was the number one concern reported by all companies (59.4%). Safety on the job for people with disabilities and their coworkers was the top concern for small, medium, and large companies. The ability of workers with disabilities to perform job duties (55.5%) and absenteeism (51.7%) were also concerns reported by more than half of respondents. Other frequently cited concerns included knowing how to address the needs of workers with disabilities (46.8%), not being able to discipline or fire a worker with a disability due to possible legal issues (46.3%), cost of accommodation (45.0%), turnover, (42.2%), and additional supervision (34.5%). The least cited concerns included attitudes of customers (28.0%), costs of health care coverage (27.3%), attitudes of coworkers (23.8%), attitudes of supervisors (17.0%), and attitudes of top-level management (14.0%). On average, companies reported 5.6 of the 15 identified concerns.

The ranking of concerns was generally similar across company size. However, there were significant differences by company size on eight of the concerns, with small and medium-sized companies more likely to report these concerns. This indicates that differences in concerns by company size where more a matter of quantity rather than quality. Small companies cited significantly more concerns on average than medium-sized or large companies. Small companies cited an average of 6.0 concerns, medium-sized companies cited 5.4 concerns, and large companies cited 4.3 concerns.

Concerns were also qualitatively similar by industry. The top two concerns—safety on the job for people with disabilities and their coworkers and the ability of workers with disabilities to perform required job duties—were the same for all three industries. Eleven of the concerns differed significantly by industry, with employers in the goods-producing sector more likely to report concerns than those in the service-providing or public administration sectors. One exception was attitudes of customers, which was more often reported as a concern by employers in the service-providing sector than those in the goods-producing or public administration sectors. This may be explained by the more customer-facing nature of jobs in the service-producing sector. Goods-producing employers reported significantly more concerns (6.5) than those in service-providing (5.5) or public administration (4.6) sectors

Data from in-depth interviews provide additional insight into the nature of employers' concerns about hiring people with disabilities. Safety was mentioned as a concern by almost all of the employers in good-producing industries such as construction and manufacturing. These employers perceived challenges with job safety compliance standards for people with disabilities. In some construction and manufacturing settings, employees are required to be certified or "badged," which means the employee can meet all of the job requirements in a safe manner. However, a few employers pointed out that people with physical disabilities are not able to meet the standards to be badged. Even when certification was not required to perform a specific job, employers expressed concerns about whether people with disabilities could perform jobs that were physically demanding. However, among the 5 employers that cited safety as a concern, 4 noted that they try to identify jobs that can be completed by people with disabilities because they are committed to hiring. Several employers also raised concerns that people with disabilities might require more paid time off, require the company to pay for costly accommodations, and require the company to pay for additional training that would not be required by people without disabilities.

Table 3-7. Percentage of companies reporting concerns about hiring people with disabilities, by size and industry

Concern	All		Company size: Small (5-49)		Company size: Medium (50-249)		Company size: Large (250 or more)		Industry: Goods-producing		Industry: Service-providing		Industry: Public administration	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Job safety for persons with disabilities and their coworkers[b]	59.4	1	59.9	1	59.3	1	55.3	1	76.1	1	56.2	1	54.3	1
Ability of workers with disabilities to perform job duties[a,b]	55.5	2	57.5	2	55.0	2	40.8	3	61.5	2	54.5	2	47.8	2
Absenteeism[a,b]	51.7	3	56.6	3	47.7	4	39.4	4	57.5	3	50.9	3	38.0	4
Knowing how to address the needs of workers with disability	46.8	4	44.9	8	49.9	3	37.0	5	55.5	5	45.2	4	40.7	3
Cannot discipline or fire a worker with a disability due to possible legal issues[a,b]	46.3	5	50.4	4	43.6	5	32.0	6	55.8	4	44.7	5	36.4	5
Cost of accommodation[b]	45.0	6	47.9	5	42.2	6	43.3	2	51.2	6	44.1	6	33.1	6
Turnover[a]	42.2	7	45.4	7	40.2	7	30.9	7	46.0	8	41.8	7	29.3	8
Productivity level[a,b]	42.0	8	45.9	6	40.2	8	21.4	11	51.2	7	40.4	8	32.5	7
Additional supervision[a,b]	34.5	9	40.1	9	30.4	9	17.1	12	39.5	9	33.8	9	23.7	10
Cost of workers compensation premiums[a,b]	30.1	10	36.7	10	24.3	11	17.3	13	39.2	10	28.4	10	23.1	11
Attitudes of customers[b]	28.0	11	29.5	12	26.2	10	30.5	8	21.2	11	29.5	11	21.5	12
Cost of health care coverage[a,b]	27.3	12	34.1	11	21.8	13	12.5	14	34.3	12	26.2	12	17.7	13
Attitudes of coworkers	23.8	13	23.5	13	24.3	12	21.6	10	25.2	13	23.4	13	26.6	9
Attitudes of supervisors[b]	17.0	14	15.7	14	17.7	14	22.7	9	22.3	14	15.8	14	20.0	14
Attitudes of top-level management	14.0	15	13.1	15	15.1	15	12.4	15	15.8	15	13.5	15	18.0	15
Any concern[a,b]	86.7		85.2		89.1		79.0		94.0		85.5		78.5	
Number of concerns (mean)[c,d]	5.6		6.0		5.4		4.3		6.5		5.5		4.6	

Source: 2018 survey Q27

N=2,023 companies.

[a] Chi-square test for difference by company size is significant at $p < .05$.

[b] Chi-square test for difference by industry is significant at $p < .05$.

[c] *F*-test for difference by company size is significant at $p < .05$.

[d] *F*-test for difference by industry is significant at $p < .05$.

While not a concern about people with disabilities *per se*, some employers cited transportation as a barrier to hiring people with disabilities, especially in rural areas. However, employers were willing to incur additional costs of hiring people with disabilities if it meant that people with disabilities would be successful on the job. One interviewee explained, *"For us, the only cost has been time if they require additional training…I don't think we care about the cost. I think what we care about is making sure that the person can be successful and they are getting what they need from us to be successful."*

Relationship of Concerns to Active Recruitment

Are companies that actively recruit less likely to have concerns about hiring people with disabilities? The results, see Table 3-8, indicate that employers that recruit people with disabilities have different magnitudes of concerns compared to those that do not actively recruit but not necessarily a different set of concerns. The rank order of concerns about hiring people with disabilities is generally similar between the two groups, suggesting that employers who recruit do not have qualitatively different concerns than those who do not actively recruit. However, companies that did not recruit reported certain concerns more often than those that did not. Specifically, employers who did not recruit were significantly more likely to report concerns about ability of people with disabilities to perform required job duties, additional supervision, productivity level, and absenteeism. This result suggests that the views on work performance of people with disabilities most strongly differentiates employers who recruit people with disabilities from employers who do not recruit. It is important to emphasize that these findings are descriptive and do not necessarily indicate that concerns deter employers from recruiting. An alternative explanation is that recruitment of and exposure to people with disabilities decreases concerns about work performance.

Concerns About Hiring People with Disabilities from In-Depth Interviews with Employers

Employer 1:

It's a bit of a challenge because they [applicants] have to meet certain requirements in order to be able to be badged [safety-certified], to be able to work on the sites we work on because it's mainly nuclear sites….So we are a little bit limited there; but a lot of our focus is on making sure that, for the jobs that badges aren't required, we post on disability job boards."

Employer 2:

"Because of the manufacturing job duties…sometimes being able to hire disabled people also becomes a challenge because they have to be able to do the duties of the job. and a lot of those jobs are very heavy construction related."

Employer 3:

"We are in a very rural area, so we are not near a city; surrounding us are multiple dairy farms. There's no bus transportation where we are, there's no train. So it's a little bit challenging for us to be as diversified as we'd like because of where we are."

Table 3-8. Percentage of companies reporting concerns about hiring people with disabilities, by whether companies actively recruit people with disabilities

Concern	All		Actively recruits people with disabilities				Difference
			Actively recruits		Does not actively recruit		
	%	Rank	%	Rank	%	Rank	
Safety on the job for people with disabilities and their coworkers	59.4	1	56.3	1	60.6	1	-4.3
Ability of workers with disabilities to perform required job duties[a]	55.5	2	41.8	4	59	2	-17.2
Absenteeism[a]	51.7	3	50.1	2	53.2	3	-3.1
Knowing how to address the needs of workers with disability.	46.8	4	42.3	3	48.2	4	-5.9
Cannot discipline or fire a worker with a disability due to possible legal issues	46.3	5	40.1	5	47.9	5	-7.8
Cost of accommodation	45.0	6	40.1	6	46.8	6	-6.7
Turnover	42.2	7	40	7	43.6	8	-3.6
Productivity level compared to non-disabled workers[a]	42.0	8	32	8	45.3	7	-13.3
Additional supervision[a]	34.5	9	23.5	13	37.5	9	-14.0
Cost of workers compensation premiums	30.1	10.0	25.1	11	31.3	10	-6.2
Attitudes of customers	28.0	11.0	31.1	9	27.9	12	3.2
Cost of health care coverage	27.3	12.0	24	12	28.7	11	-4.7
Attitudes of coworkers	23.8	13.0	25.7	10	23.2	13	2.5
Attitudes of supervisors	17.0	14.0	21.2	14	16.4	14	4.8
Attitudes of top-level management	14.0	15.0	17.5	15	13.5	15	4.0

Source: 2018 survey Q22, Q27

N=1,856 companies. Excludes 167 companies that responded don't know or refused to Q22.

[a] Chi-square test for difference by actively recruits is significant at $p < .05$.

The exploratory factor analysis produced a multidimensional scale with two factors for positive attitudes (benefits) and three factors for negative attitudes (concerns). For positive attitudes, the first factor, which we labeled *competitive advantage*, included four items that addressed a positive image with prospective employees, a positive image with customers, increased morale, and increased pool of qualified candidates. This factor explains 81 percent of the variance in the data. This factor taps the positive impact that employers believe people with disabilities will have on company image within and outside the company and on creating morale through an inclusive and diverse workplace culture.

The second factor, which we labeled *profitability*, includes three items: reduced liability for legal issues due to lack of diversity, financial incentives such as tax breaks for accommodations, and increased productivity. This factor explained 19 percent of the variance. This factor is related to the effect that people with disabilities have on profitability through work ethic and possible tax credits and avoidance of costly lawsuits.

A similar factor analysis was conducted for negative attitudes. Three factors emerged. The first of these, labeled *work performance*, included seven items that addressed the ability of workers with disabilities to perform job duties, productivity, additional supervision, safety, turnover, absenteeism, and cannot discipline or fire due to legal issues. This factor explained 71 percent of the variance in the data. This factor taps the negative impact that employers believe people with disabilities will have on the workplace and productivity.

The second factor, labeled *social issues*, included four items related to the anticipation of negative reactions of others: attitudes of supervisors, attitudes of top-level management, attitudes of coworkers, and attitudes of customers. This factor explained 21 percent of the variance. These items go beyond concerns about workplace performance and include an emphasis on the disability itself.

The third factor, labeled *cost*, included three items related to concerns about the costs of people with disabilities in the workplace: cost of health care coverage, cost of workers compensation premiums, and cost of accommodation. This factor explained 8 percent of the variance. This factor shows some of the misconceptions that employers have about the costs of employing people with disabilities. Table 3-9 summarizes the results of the factor analyses. One item—do not know how to accommodate a worker with a disability—did not load onto any of the scales. Detailed results from the factor analyses are in Appendix G.

Employer Attitudes and Employer-Related Variables

In addition to exploring how responses to individual benefit and concern statements vary by company size and industry, we also examined how the employer attitude dimensions were related to company characteristics. Doing so involved creating scales by summing the items included in each dimension. For benefits, each item was assigned number values with 1=Yes and 2=No. For concerns, each item was assigned number values with 1=Not a concern, 2=Somewhat a concern, and 3=A major concern. The summated scales were standardized to 100 by dividing the score by the total possible score. We then used *F*-tests to determine whether there were significant differences in attitudes by company characteristics.

Table 3-9. Items that constitute positive and negative employer attitudes about hiring people with disabilities

Positive attitudes		Negative attitudes		
Competitive advantage	**Profitability**	**Work performance**	**Social issues**	**Cost**
Positive image with prospective employees	Reduces liability for legal issues due to lack of diversity	Ability of workers with disabilities to perform required job duties	Attitudes of supervisors	Cost of health care coverage
Positive image with customers	Benefits because of increase financial incentives such as tax breaks for accommodations	Productivity level compared to non-disabled workers	Attitudes of top-level management	Cost of workers compensation premiums
Increase morale	Increases productivity	Additional supervision	Attitudes of co-workers	Cost of accommodation
Increases the pool of qualified candidates		Safety on the job for persons with disabilities and their coworkers	Attitudes of customers	
		Turnover		
		Absenteeism		
		Cannot discipline or fire a worker with a disability due to possible legal issues		
		Item that did not load: Knowing how to address the needs of workers with disability.		

Note: The items are ordered by their statistical importance within each factor.

Table 3-10 shows that, for positive attitudes, a significant relationship existed between company size and both dimensions. Medium and large-sized companies were more likely to hold positive attitudes about competitive advantage and profitability than small companies. There were also significant differences by industry. Employers in the service-providing and public administration sectors were more likely to have positive attitudes about competitive advantage than those in the goods-producing sector. This may be related to the more public-facing nature of jobs in the service-providing and public administration sectors. There was no significant difference in positive attitudes about profitability by industry.

Looking at the results for negative attitudes, small companies were more likely than medium-sized and large companies to have negative attitudes about work performance and cost, but there were no differences by size on attitudes about social issues. The mean work performance concerns scale score was 57 for small companies, 53 for medium-sized companies, and 47 for large companies. The mean cost concerns scale scores were 51, 46, and 43, for small, medium-size, and large companies,

respectively. A similar pattern was observed for the relationship between social issues and industry. Goods-producing employers had more negative views about work performance and cost compared to employers in the service-providing and public administration sectors.

Table 3-10. Relationship between employer attitudes about hiring people with disabilities and company characteristics

Employer's attitude	Company size			Industry		
	Small	Medium	Large	Goods-producing	Service-providing	Public administration
Positive attitudes						
Factor 1: Competitive advantage[a, b]	58.7	73.1	83.2	57.3	68.1	75.0
Factor 2: Profitability[a]	26.9	34.0	41.2	28.3	31.4	26.1
Negative attitudes						
Factor 1: Work performance[a, b]	56.8	52.9	47.3	59.3	53.6	50.5
Factor 2: Social issues	42.4	42.8	41.5	43.1	42.4	43.5
Factor 3: Cost[a,b]	51.4	45.5	43.0	51.7	47.7	43.3

N=1,425 to 1,947 companies.

[a] *F*-test for difference by company size is significant at $p < .05$.

[b] *F*-test for difference by industry is significant at $p < .05$.

Table 3-11 shows that employers attitudes are related to characteristics of respondents. Respondents who were in Human Resources were significantly more likely than presidents/owners/chief executive officers or managers or supervisors to have positive attitudes about competitive advantage and profitability. Respondents who interacted with a person with a disability inside or outside of the workplace were significantly more likely to have positive attitudes about competitive advantage than those who did not interact with a person with a disability.

With regard to negative attitudes, presidents/owners/chief executive officers were significantly more likely to have negative attitudes about work performance and cost than those in Human Resources or managers or supervisors.

Table 3-11. Relationship between employer attitudes about hiring people with disabilities and respondent characteristics

Employer attitude	Position in company			Interacted with person with disability inside or outside of work	
	President, owner, or CEO	HR	Manager, supervisor, or other professional	Yes	No
Positive attitudes					
Factor 1: Competitive advantage[a]	63.5	81.7	65.5	68.0	56.8
Factor 2: Profitability[a]	26.9	46.6	30.1	31.4	25.4
Negative attitudes					
Factor 1: Work performance[a]	58.3	49.2	52.6	54.0	57.6
Factor 2: Social issues	42.2	41.1	42.3	42.6	42.1
Factor 3: Cost[a]	52.5	43.6	45.8	47.7	51.7

HR, Human Resources; CEO, Chief Executive Officer

N=1,425 to 1,947 companies.

[a] *F*-test for difference by position in company is significant at $p < .05$.

3.3 Practices and Policies

In addition to employer attitudes, workplace practices can facilitate or impede the employment of people with disabilities. Studies that have attempted to analyze the connection between practices and hiring people with disabilities have identified some successful practices. Erickson, von Schrader, Bruyere, VanLooy and Matteson (2014) found that 9 of 10 recruitment practices increased the likelihood of hiring people with disabilities. These included actively recruiting people with disabilities, partnerships with community organizations, diversity plans, explicit goals for hiring people with disabilities, including goals for hiring people with disabilities in management performance, internships for people with disabilities, senior management commitment, review of online job application accessibility, and advance notice about accommodations in the job application process. Research on the success of retention practices is more limited than hiring practices. Habeck, Rachel, Hunt, and Kregal (2010) found that several retention practices were associated with retention effectiveness, including the provision of development opportunities to employees at every level, seeking the ideas and involvement of employees, and assuring they know how their work and performance support the mission.

The 2018 employer survey included questions about implementation of recruitment, hiring, retention, and advancement practices. The analysis examined the extent to which companies implemented these practices overall and by company characteristics, as well as whether the practices were related to actual hiring, retention, and advancement of people with disabilities.

3.3.1 Recruitment and Hiring Practices

Companies were asked about eight different recruitment and hiring practices and policies. Table 3-12 shows the percentage of companies that said they implemented each practice or policy. The vast majority of companies (91.6%) indicated they have interview locations that are accessible to all people with disabilities. Eighty-one percent of companies provided an opportunity for all job interview candidates to request an accommodation for the interview, and 74.0 percent said that they post job announcements that display a policy of nondiscrimination and equal opportunity. The remaining practices were implemented by 30 percent or less of employers, including having an application process that is accessible to all people with disabilities (30.4%), actively recruiting people with disabilities (17.5%), developing partnerships with organizations to recruit people with disabilities (16.8%), having measurable goals for hiring people with disabilities (10.5%), and having a dedicated recruiter for hiring people with disabilities (4.2%).

Because company size, industry, and federal contractor status may be interrelated, we used a logistic regression analysis to examine differences by company characteristics. Table 3-13 shows the results of the logistic regression analysis predicting the presence of each type of recruitment or hiring policy or practice controlling for company characteristics. The results are presented as odds ratios. The odds ratio gives the odds relative to the reference group. For company size, the reference group is small; for industry, it is goods-producing; for federal contractor status, it is non-contractor. An odds ratio of greater than 1 indicates that the company characteristic is associated with a greater likelihood

Recruitment and Hiring Practices from Survey Data

All companies: Most companies implemented accessible interview locations, interview accommodations, and nondiscrimination/equal opportunity policy in job announcements. Few companies implemented other disability inclusive practices.

Company size: Large companies were more likely than medium and small companies to implement most of the practices.

Industry: Service-providing and public administration employers were more likely to implement most of the practices.

Federal contractor status: Federal contractors were more likely to implement six of the eight practices.

Effectiveness of practices: Five of eight practices were significantly associated with an increased likelihood of hiring people with disabilities.

of the practice; an odds ratio of less than 1 indicates that the characteristic is associated with a lower likelihood; and an odds ratio of 1 indicates parity. Companies that responded don't know to a specific practice were included as not having the practice in the regression model. The table shows that medium-sized companies where generally similar to small companies in terms of recruitment and hiring practices, whereas large companies were more likely to implement most of the practices than other companies. Large companies were between 3 and 24 times more likely to implement each practice than small companies. The only practice that was not significantly more likely in large companies was accessible interview locations.

The table also shows that for industry, patterns were less consistent than for company size. Employers in the service-providing and public administration sectors were significantly more likely to implement some of the practices compared to those in the goods-producing sector. Companies in the service-providing sector were more likely to implement two of the practices—an accessible application process and accessible interview locations. Companies in the service-providing sector were about 2 times as likely to implement each of these practices. Public administration employers were significantly more likely to implement four of the practices—non-discrimination/equal opportunity policy in job announcements, an accessible application process, interview accommodations, and active recruitment. Public administration employers were between 2 and 5 times as likely to implement each of these practices.

Federal contractors were more likely to implement six of the eight practices compared to non-contractors. Federal contractors were 2 times as likely to implement partnerships with organizations, 3 times as likely to actively recruit, display nondiscrimination/equal opportunity policy in job announcements, have a dedicated recruiter, and have measurable goals for hiring people with disabilities, and 6 times as likely to have accessible interview locations. The only two practices that federal contractors were not more likely to implement were accessible interview locations and interview accommodations, likely due to a ceiling effect as the vast majority of companies do these things.

Table 3-12. Percentage of companies implementing recruitment and hiring practices and policies, by company size, industry, and federal contractor status

Policy or practice	All	Company size			Industry			Federal contractor	
		Small	Medium	Large	Goods-producing	Service-providing	Public administration	Yes	No
Job announcements display non-discrimination/equal opportunity policy	74.0	62.6	83.4	97.9	73.3	73.6	94.1	90.6	72.6
Application process is accessible	30.4	24.6	33.6	56.9	22.3	31.7	40.8	39.3	29.5
Interview accommodations	80.5	75.8	83.6	97.8	76.8	80.9	92.8	89.0	80.1
Interview locations that are accessible	91.6	89.8	93.2	94.2	87.8	92.1	99.9	98.4	91.1
Partnerships with organizations	16.8	12.6	18.6	40.4	17.6	16.6	17.9	33.8	15.5
Measureable goals for hiring people with disabilities	10.5	8.1	11.2	26.4	10.7	10.5	8.6	25.8	9.1
Dedicated recruiter	4.2	3.3	4.4	11.5	4.4	4.2	6.9	11.0	3.5
Actively recruits people with disabilities	17.5	10.7	21.7	43.7	14.7	17.7	30.0	38.2	15.7

Source: 2018 survey Q25

For analyses by company size and industry N=2,023 companies. For analysis by federal contractor status, N=1,984 companies. Excludes 39 companies that responded don't know or refused to Q10 on federal contractor status.

Table 3-13. Adjusted odds ratios for the probability that a company has a recruitment or hiring practice or policy

Policy or practice	Company size (Base=Small)		Industry (Base=Goods-producing)		Federal contractor (Base=Non-contractor)
	Medium	Large	Service-providing	Public administration	Federal contractor
Job announcements display non-discrimination/equal opportunity policy	2.9**	23.7***	1.1	4.9***	2.5*
Application process is accessible	1.6	3.9***	1.7**	2.1**	1.3
Interview accommodations	1.6***	12.6***	1.4	3.4***	1.6
Interview locations that are accessible	1.5	1.4	1.8*	–	5.6**
Partnerships with organizations	1.5	4.1***	1.0	0.9	2.2**
Measureable goals for hiring people with disabilities	1.3	3.4***	1.1	0.7	2.8**
Dedicated recruiter	1.3	3.0**	1.0	1.4	2.6**
Actively recruits people with disabilities	2.2***	5.4***	1.4	2.2*	2.5***

* p < .05 ** p < .01 *** p < .001

Note: Each row represents a separate logistic regression model. "– " indicates that the odds ratio for industry could not be estimated because nearly 100 percent of public administration employers said they had accessible interview locations.

N=2,023 companies.

While the implementation of practices is an important indicator of an inclusive work environment, it does not reveal whether the presence of practices is related to the actual hiring of people with disabilities. We used a logistic regression analysis to examine the relationship between each practice or policy and whether a company hired people with disabilities in the past 12 months. A separate logistic regression model was run for each of the eight practices because they were highly related. That is, employers who reported one practice were likely to report other practices, as well. Table 3- 14 reports the results of the logistic regression models. Five of the eight recruitment and hiring practices were significantly related to hiring people with disabilities in the past 12 months. The practices that were most strongly related to hiring people with disabilities were measureable goals for people with disabilities and partnerships with organizations. Both increased the odds of hiring by a factor of 3. Companies that implemented these practices were 3 times as likely to hire people with disabilities than those that did not implement these practices. Accessible interview locations, active recruitment of people with disabilities, and an accessible application process were also significantly related to hiring people with disabilities.

Table 3-14. Logistic regression predicting the probability that a company hired people with disabilities in the past 12 months based on recruitment and hiring practices and policies

Recruitment or hiring practice	Odds ratio	Confidence interval
Job announcements display non-discrimination/equal opportunity policy	1.2	0.7, 2.1
Application process is accessible	1.6*	1.0, 2.3
Interview accommodations	1.2	0.7, 2.2
Interview locations that are accessible	2.6*	1.1, 6.5
Partnerships with organizations	3.2**	1.2, 2.7
Measureable goals for hiring people with disabilities	3.2***	1.8, 4.8
Dedicated recruiter	0.9	0.5, 1.6
Actively recruits people with disabilities	2.0***	1.3,3.2

* p < .05 ** p < .01 *** p < .001

Note: Each row represents a separate logistic regression model that controls for company size, industry, and federal contractor status.

N=2,023 companies.

3.3.2 Retention and Advancement Policies and Practices

The survey asked companies about eight retention and advancement practices. More than 80 percent of companies said that they had a process for people with disabilities to voluntary and confidentially disclose that they have a disability (Table 3-15). Three in four employers (73.3%) indicated that they

have stay-at-work/return-to-work programs or policies. Two-thirds indicated that they have workplace flexibility programs, such as flextime or telecommuting (69.2%) and task shifting (64.7%). About half (51.7%) of employers said that they offered disability awareness or sensitivity training. Just under 30 percent (28.6%) had measurable goals for retaining or advancing people with disabilities, and only 4.7 percent offered a disability employee resource or affinity group.

Retention and Advancement Practices from Survey Data

All companies: **Most companies implemented voluntary and confidential self-disclosure, stay-at-work/return-to-work programs or policies, workplace flexibility programs, task shifting, and disability awareness or sensitivity training.**

Company size: **Large companies were more likely than medium and small companies to implement most of the practices.**

Industry: **There were few differences by industry.**

Federal contractor status: **Federal contractors were more likely to implement two of the eight practices.**

Effectiveness of practices: **Five of eight practices were significantly associated with an increased likelihood of either retaining or promoting people with disabilities.**

Table 3-16 shows the results of the logistic regression analysis predicting the presence of each type of retention and advancement practice controlling for company characteristics. Medium-sized companies were generally similar to small companies in terms of retention and advancement practices, whereas large companies were significantly more likely to implement five of the eight retention and advancement practices compared to small companies. Large companies were 6 times as likely to have job reassignments and 5 times as likely to have stay-at-work/return-to-work programs or policies. They were also 4 times as likely to have voluntary and confidential self-disclosure, 3 times as likely to have a disability employee resource or affinity group, and 3 times as likely to have disability awareness or sensitivity training.

Table 3-16 also shows that there were few differences by industry once company size was controlled. Employers in the service-providing and public administration sectors were twice as likely as those in the goods-producing sector to have disability awareness or sensitivity training. Companies in the service-providing sector were twice as likely as those in the goods-producing sector to have workplace flexibility policies and 1.4 times as likely to have task shifting. The greater implementation of workplace flexibility policies in the service-providing sector may be explained by the fact these employers may not require employees to be on site as much as goods-producing or public administration employers.

There were few differences between federal contractors and non-contractors in terms of retention and advancement practices. Federal contractors were significantly more likely to implement only two of the practices—job reassignments and workplace flexibility policies. Federal contractors were 2 times as likely to implement each of these practices.

We used logistic regression to examine the relationship between retention and advancement practices and retention success. Retention success was constructed using two variables—whether a company hired people with disabilities in the past 12 months and whether a company currently employed people with disabilities. Successful retention was defined as having hired people with disabilities in the past 12 months and currently employing people with disabilities. Unsuccessful retention was defined as having hired people with disabilities in the past 12 months and not currently employing people with disabilities. The analysis excluded companies that did not hire people with disabilities in the past 12 months. Among companies that hired people with disabilities in the past 12 months, 86 percent currently employed people with disabilities and were considered successful at retention.[6]

[6] It is important to emphasize that this measure is not a retention rate and may overstate actual retention success. Because retention success is measured by having any current employees with a disability 1 year after hiring, "successful" companies could have had one or more employees with disabilities leave the company. Moreover, retention is measured over a relatively short period of 1 year or less. Therefore, the criteria for retention success is a relatively low bar, especially for companies that have multiple employees with disabilities. In addition, because the relatively small number of companies that hired people with disabilities in the past 12 months is modest, the analysis may be underpowered to detect effects of practices on retention.

Table 3-15. Percentage of companies implementing retention and advancement practices and policies, by company size, industry, and federal contractor status

Policy or practice	All	Company size			Industry			Federal contractor	
		Small	Medium	Large	Goods-producing	Service-providing	Public administration	Yes	No
Disability awareness or sensitivity training	51.7	45.3	56.4	71.6	40.7	53.5	67.0	60.2	51.0
A disability employee resource or affinity group	4.7	4.5	4.0	13.6	4.2	4.8	7.7	7.2	4.3
SAW/RTW programs or policies	73.3	66.7	78.3	91.5	75.9	72.6	81.3	77.9	73.1
Workplace flexibility programs	69.2	66.9	70.8	76.4	56.9	71.8	62.0	79.4	68.3
Job reassignments	59.6	48.3	68.7	86.3	61.0	59.2	62.7	80.3	58.1
Voluntary and confidential self-disclosure	82.9	78.4	86.6	93.3	81.5	83.1	86.8	86.5	82.7
Measurable goals for retaining/advancing people with disabilities	28.6	27.1	29.5	34.4	26.5	29.1	22.1	31.9	28.1
Task shifting	64.7	59.4	68.6	79.9	59.6	65.8	61.0	73.0	64.3

Source: 2018 survey Q26

For analyses by company size and industry N=2,023 companies. For analysis by federal contractor status, N=1,984 companies. Excludes 39 companies that responded don't know or refused to Q10 on federal contractor status.

Table 3-16. Adjusted odds ratios for the probability that a company has a retention or advancement practice or policy

Policy or practice	Company size (Base=Small)		Industry (Base=Goods-producing)		Federal contractor (Base=Non-contractor)
	Medium	Large	Service-providing	Public administration	Federal contractor
Disability awareness or sensitivity training	1.6	2.9***	1.8***	2.7***	1.3
A disability employee resource or affinity group	0.9*	3.1**	1.1	1.6	1.4
SAW/RTW programs or policies	1.8	5.4***	0.9	1.2	1.0
Workplace flexibility programs	1.2	1.5	2.0***	1.2	1.8*
Job reassignments	2.3	6.1***	1.0	0.9	2.2**
Voluntary and confidential self-disclosure	1.8	3.8*	1.2	1.3	1.1
Measurable goals for retaining/advancing people with disabilities	1.1	1.4	1.2	0.8	1.1
Task shifting	1.5	2.7	1.4*	0.9	1.3

* p < .05 ** p < .01 *** p < .001

Note: Each row represents a separate logistic regression model.

N=2,023 companies.

Table 3-17 shows the results of logistic regression models predicting retention success. Three of the eight retention and advancement practices were significantly related to an increased likelihood of retention success with recent hires, including a disability employee resources group, workplace flexibility programs, and voluntary and confidential self-disclosure. The wide confidence intervals for the odds ratios reflect the small sample size due to limiting the analysis to companies that hired people with disabilities in the past 12 months. It is not surprising that stay-at-work/return-to-work, job reassignments, and task shifting were unrelated to retention of recent hires as these practices tend to be directed at workers who become disabled.

Table 3-17. Logistic regression predicting the probability retention success with people with disabilities based on retention and advancement practices

Retention or advancement practice	Odds ratio	Confidence interval
Disability awareness or sensitivity training	1.0	0.4,2.7
A disability employee resource or affinity group	15.4**	2.8,83.7
Stay-at-work/return-to-work programs or policies	0.7	0.2,2.4
Workplace flexibility programs	3.3*	1.0,10.9
Job reassignments	1.4	0.5,4.0
Voluntary and confidential self-disclosure	4.8*	1.1,20.6
Measurable goals for retaining/advancing people with disabilities	0.7	0.2,2.3
Task shifting	1.0	0.3,3.1

* p < .05 ** p < .01 *** p < .001

Note: Each row represents a separate logistic regression model that controls for company size, industry, and federal contractor status.

N=384 companies that hired people with disabilities in the past 12 months.

Table 3-18 shows the results of logistic regression models predicting whether a company promoted people with disabilities in the past 3 years. The analysis includes only companies that employed people with disabilities in the past 3 years. Among companies that employed people with disabilities in the past 3 years, 14 percent (not shown) indicated that they promoted people with disabilities. Three of the eight retention and advancement practices were significantly related to an increased likelihood of promoting people with disabilities, including stay-at-work/return-to-work programs or policies, workplace flexibility programs, and job reassignments. While the odds ratios for all of the remaining practices are in a positive direction, they do not reach statistical significance. The smaller sample of companies that employed people with disabilities in the past 3 years may preclude drawing firm conclusions from this analysis. Taken together with the findings from the logistic regression

predicting retention success, five of the eight retention and advancement practices were related to either retention success with recent hires or promotion of people with disabilities.

Table 3-18. Logistic regression predicting the probability that a company promoted people with disabilities based on retention and advancement practices

Retention or advancement practice	Odds ratio	Confidence interval
Disability awareness or sensitivity training	1.2	0.7,2.0
A disability employee resource or affinity group	1.2	0.6,2.5
SAW/RTW programs or policies	2.8**	1.4,5.7
Workplace flexibility programs	2.0*	1.1,3.4
Job reassignments	1.8*	1.0,3.2
Voluntary and confidential self-disclosure	1.7	0.8,3.6
Measurable goals for retaining/advancing people with disabilities	1.5	0.9,2.6
Task shifting	1.5	0.9,2.5

* p < .05 ** p < .01 *** p < .001

Note: Each row represents a separate logistic regression model that controls for company size, industry, and federal contractor status.

N=1,388 companies that employed people with disabilities in the past 3 years.

About half of the companies that participated in qualitative interviews identified effective practices for accommodating people with disabilities. Two frequently cited practices among large companies included having a written description of how to request an accommodation and having an Americans with Disabilities Act coordinator to facilitate requests and serve as the a point of contact for employees who are requesting an accommodation. Employers described the process as interactive, during which the Americans with Disabilities Act coordinator and the employee discuss the employee's job duties and how accommodation can facilitate his/her ability to complete the job duties. Small-and medium-sized companies tended to rely on supervisors to request accommodations for their employees. Employees at these companies communicate with their supervisors about their need, and then the employee and supervisor work with managers to determine what accommodation is necessary and how best to provide it. About half of employers said that they wish there were such policies at their company, but there was nothing formal in place.

Among the 20 employers interviewed, 5 described at least one obstacle to providing accommodations for employees with disabilities. These obstacles included lack of understanding among supervisors about the need for accommodations and the cost of accommodations. Three of the 5 construction industry employers reported that the nature of their industry limits the types of accommodations that can be offered due to safety concerns. One construction employer explained

that, *"it can be complicated to accommodate some disabilities in a construction setting. We need to be fair and consistent and make sure accommodations make sense company-wide. Safety is a priority, so we don't really do many accommodations in the field."* According to another interviewee, *"the physical nature of what we do it the biggest hurdle [to providing accommodations]."*

About half of the companies interviewed mentioned challenges to retention and promotion of employees with disabilities. Supervising an employee with a disability often requires a higher level of communication between supervisor and employee to ensure that the employee's needs are being met. Small companies reported having a less formal process for supporting managers and described their approach as managing on a "case-by-case" basis. Medium-sized and large employers reported more formal training and mentoring/coaching programs for managers as well as regular check-ins with new hires to determine whether needs are being met. According to one employer, a challenge to promoting employees with disabilities is that some employees with disabilities do not want to receive promotion because an increase in earned income could offset Social Security Insurance benefits. Finally, despite probes, employers were not forthcoming about the role—positive or negative—that disability played in decisions about termination or disciplinary action of employees with disabilities.

3.4 Recruitment and Hiring of Veterans with Disabilities

In 2018, there were 19.2 million veterans in the U.S. Of these, 4.7 million, or 25 percent, had a service-connected disability. Nearly half of these veterans had a service-connected disability rating of 60 percent or higher (Bureau of Labor Statistics, 2019a). One study found that 30 percent of Operation Enduring Freedom and Operation Iraqi Freedom veterans screened positive for post-traumatic stress disorder, traumatic brain injury, or depression (Meadows et al., 2015). These so-called "signature" disabilities of veterans are stigmatized as they can evolve over time, or are considered unpredictable by employers (Rudstan, Strobel Gower, and Cook, 2012). While these disabilities may be invisible, veteran status is often collected on job applications, and thus veterans may still face stigma due to these disabilities. Another common disability faced by veterans, disfigurement, leads some employers to be concerned about customer reactions to these veterans' disabilities (Stone & Stone, 2015). In 2018, veterans with a disability were unemployed at a higher rate (5.2%) compared to veterans without a disability (3.5%) (Bureau of Labor Statistics, 2019b).

In addition to the Americans with Disabilities Act, which covers veterans, several federal laws and initiatives are designed to encourage employers to hire veterans with disabilities , including:

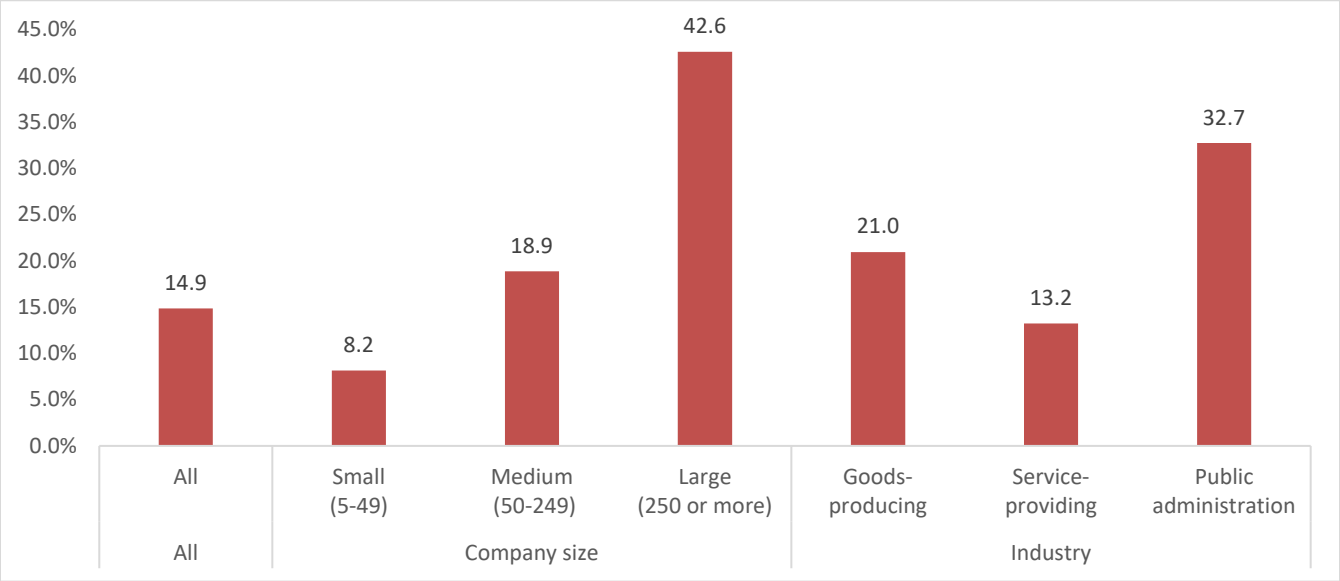
- The *Uniformed Services Employment and Reemployment Rights Act* requires employers to reinstate veterans who are returning from military service.
- The *Vietnam Era Veterans' Readjustment Assistance Act* requires employers who are federal contractors or subcontractors to provide affirmative action and equal opportunity to "Special Disabled Veterans" with disability ratings of 30 percent or more or who have serious employment disability or were discharged due to a service-connected disability.
- The *Returning Heroes Tax Credit* and *Wounded Warrior Tax Credit* provide incentives to employers to hire returning unemployed veterans and those with service-connected disabilities. The latter is for long-term unemployed with a service-connected disability .

Employer practices on disability are likely to impact veterans with disabilities. Past research suggests employers are unaware of resources to address issues related to veterans with disabilities and are concerned about the costs of accommodating signature disabilities (Rudstan, 2012).

All companies were asked whether they made special efforts to recruit veterans. Figure 3-5 shows the 14.9 percent of all companies reported that they make special efforts to recruit veterans. There were significant differences by company size and industry in the percentage of companies that make special efforts to recruit veterans. Large companies were more likely than small and medium-sized companies to recruit veterans. Public administration employers were more likely than those in the goods-producing or service-providing sectors to recruit veterans.

Figure 3-6 shows that only 6.9 percent of companies said that they hired veterans with disabilities in the past 12 months. There were significant differences by company size and industry. Large companies were more likely than medium-sized or small companies to have hired veterans with disabilities in the past 12 months. Twenty-three percent of large companies hired veterans with disabilities in the past 12 months compared to 9.6 percent of medium-sized and 4.6 percent of small companies. Public administration employers were more likely than those in the goods-producing and service-providing sectors to have hired Veterans with disabilities in the past 12 months.

Figure 3-5. Percentage of companies that make special efforts to recruit veterans

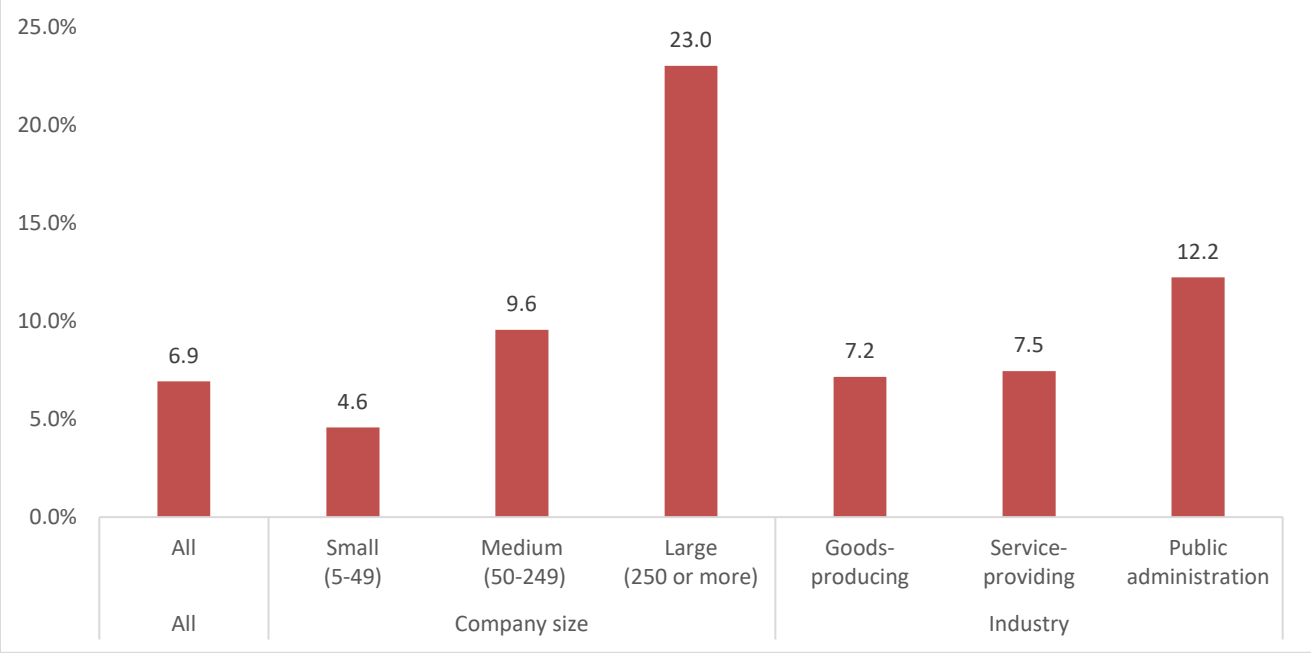


Source: 2018 survey Q31

Chi-square test for differences by company size and industry are significant at p < .05.

N=2,023 companies.

Figure 3-6. Percentage of companies that hired Veterans with disabilities in the past 12 months



Source: 2018 survey Q29, Q30

Chi-square test for differences by company size and industry are significant at p < .05.

N=2,023 companies.

Table 3-19 shows information that companies believe would be helpful for recruiting veterans with disabilities. The top three strategies, cited by two-thirds of all companies, included information on how to address mental illness (67.5%), including post-traumatic stress disorder, using a recruiting source (67.4%), and programs to help veterans transition from military culture to the civilian workplace (67.1%). All of the remaining information sources were rated as helpful by more than half of companies: programs to help veterans translate military skills to the civilian workplace (65.6%), information about how to address combat-related physical disabilities (60.1%), and tax credits for hiring veterans or disabled veterans (56.3%).

Table 3-19. Percentage of companies reporting different strategies that would be helpful for hiring veterans

Strategy	All		Company size						Industry					
			Small (5-49)		Medium (50-249)		Large (250 or more)		Goods-producing		Service-providing		Public administration	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Information about how to address mental illness, including PTSD [a]	67.5	1	62.0	3	71.8	1	82.2	2	70.4	2	66.8	2	70.8	1
Using a recruiting source[a]	67.4	2	62.7	1	70.5	2	84.9	1	69.9	3	67.1	1	61.0	3
Programs to help veterans transition from the military culture to the civilian workplace culture[a]	67.1	3	62.2	2	70.6	3	82.1	3	70.6	1	66.4	3	66.1	4
Programs to help veterans translate military skills to the civilian workforce[a,b]	65.6	4	60.1	4	70.2	4	77.6	4	69.0	4	64.9	4	67.0	2
Information about how to address combat-related physical disabilities[a]	60.1	5	55.2	5	63.8	5	75.4	5	63.8	5	59.3	5	63.7	5
Tax credits for hiring veterans or disabled veterans[b]	56.3	6	53.1	6	59.4	6	58.8	6	64.9	6	55.2	6	31.0	6

PTSD, Post-traumatic stress disorder

Source: 2018 survey Q32

[a] Chi-square test for difference by company size is significant at $p < .05$.

[b] Chi-square test for difference by industry is significant at $p < .05$.

N=2,023 companies.

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4. Conclusion

The *2018 Survey of Employer Policies on the Employment of People with Disabilities* marks an important effort by ODEP to document employer efforts to recruit, hire, retain, and advance people with disabilities with a sample of companies drawn from a nation-wide directory. The following sections of this chapter describe the major findings, limitations, and implications for policy and practice and identify areas for future research.

4.1 Key Findings

While there was a modest increase in the percentage of companies that employ people with disabilities in the past decade from 18 percent to 23 percent, people with disabilities comprise only 1 to 2 percent of company workforces. There were differences by company size in the employment of people with disabilities. Two-thirds of large companies employed people with disabilities compared to 29 percent of medium-sized and 12 percent of small companies, respectively, which to some degree reflects that statistical reality of more jobs in large companies. There were also modest increases in the percentages of companies that recruit and hire people with disabilities. The percentage of companies that recruit people with disabilities increased from 14 to 18 percent and the number that hired people with disabilities in the past 12 months increased from 9 percent to 14 percent. It is notable that even in the strongest economy in decades, only 18 percent of companies actively recruit people with disabilities and only 14 percent hired people with disabilities in the past 12 months.

Past studies on employer attitudes have tended to focused on concerns rather than benefits (Lindsay et al., 2018). More than 70 percent of companies believe that hiring people with disabilities will improve corporate image and provide qualified candidates. Employers in the service-providing and public administration sectors were more likely to cite benefits (3.4 and 3.5 on average, respectively) than those in the goods-producing sector (2.8 on average). To the extent that companies believe that people with disabilities improve corporate image, this difference may be explained by the more customer-facing nature of jobs in the service-providing and public administration sectors.

While several tax incentives exist to encourage companies to hire people with disabilities, this benefit was ranked at the bottom by companies. There are four possible explanations for this finding. First, existing tax credits may not be sufficiently large to attract companies to hire people with disabilities.

Second, companies may find the process of applying for such benefits too confusing or time consuming. Third, some companies may simply be unaware of tax credits for hiring people with disabilities. Finally, it is possible that tax incentives are generally ineffective motivators because of the distance between the hiring manager and the person responsible for applying for the tax benefit. A survey conducted by the Society for Human Resource Management found that employers were unfamiliar with tax credits and very few had used them (Lengrick-Hall et al., 2001). Interestingly, citing tax credits as a benefit was least strongly related to recruitment of people with disabilities, suggesting that tax credits do not play a large role in the decision to recruit people with disabilities among companies that do so.

Across all companies, the most cited concern was about safety on the job of people with disabilities and coworkers. Interestingly, safety was equally cited as a concern by companies in the goods-producing and service-providing sectors, suggesting that the concern was not confined to physically demanding jobs that are more typical in the goods-producing sector. People with disabilities are not more likely to be injured on the job, suggesting that fear of injury should not be considered when hiring people with disabilities (Lysaght, Sparring, Ouellette-Kuntz, and Marshall, 2011). With regard to other concerns, most are not supported by research. Studies suggest that differences in productivity, absenteeism, and supervision between employees with disabilities and employees without disabilities are non-existent or small and that the costs of accommodations are modest (Hartnett, Stuart Thurman, Loy, and Batiste, 2011; Hernandez and McDonald, 2010; Schartz, Hendricks, and Blanck, 2006).

Employer practices are also a factor that affects job access and retention for people with disabilities. A few hiring and recruitment practices were implemented near universally by companies. More than 90 percent of companies had accessible interview locations, more than 80 percent offered interview accommodations, and about three-in-four displayed equal opportunity/non-discrimination policy in job announcements. However, the practices most likely to be implemented by companies were not the ones that increased the likelihood of hiring people with disabilities. The practices that were related to hiring were implemented by few of the companies. In general, more companies were implementing practices to retain and advance people with disabilities than to recruit and hire people with disabilities. Several practices were strongly related to retention and advancement of people with disabilities. Providing employers who wish to recruit, retain, and advance people with disabilities

with information about these practices may help companies successfully recruit and retain, thereby making workplaces more inclusive. Small and goods-producing employers were least likely to implement most practices. However, many of the practices may be more amenable to implementation in medium-sized and large employers, suggesting that ODEP target medium-sized and large employers for education about best practices.

Finally, consistent with Section 503, federal contractors were significantly more likely to implement disability inclusive practices than other companies after controlling statistically for company characteristics. Specifically, federal contractors were 3 to 6 times as likely to implement 6 recruitment and hiring practices and twice as likely to implement 2 retention and advancement practices. This suggests that Section 503 may be having a positive impact on federal contractors. However, it is noteworthy that several of the practices were not universally implemented by federal contractors. Less than half of federal contractors reported implementing the following practices: an accessible application, actively recruiting people with disabilities, partnerships with organizations to recruit people with disabilities, goals for hiring people with disabilities, and a dedicated recruiter. This suggests that while federal contractors are responding to the regulatory changes, there is progress to be made. Federal contractors may benefit from additional outreach and educational opportunities related to disability-inclusive practices.

4.2 Study Limitations

The findings from this study should be interpreted with several limitations in mind. First, while the survey included a definition of disability, employers would only be aware of disabilities if they were visible or if employees disclosed them. Therefore, companies may have underestimated the extent to which they employed or hired people with disabilities to the extent that some disabilities were invisible or not disclosed. Mental illness is a hidden disability in many cases, especially depression. Employers may be reacting to the fact that they do not really know who among their employees has a disability.

Second, employers may have felt inclined to provide positive attitudes and indicate that they were implementing certain practices and policies due to social desirability bias. For some questions, employers chose responses of "don't know" and "refused." Such responses may indicate that employers had not thought about the concern and thus had no opinion. An alternative explanation

is that employers did not want to reveal a true negative attitude due to social desirability. Despite this possibility, more than 80 percent of employers did express concerns about people with disabilities.

Third, type of disability is likely a major factor in attitudes and willingness to accommodate that was not explored in this study due to the short length of the survey. Employers view people with psychiatric disabilities more negatively than those with physical disabilities (Biggs, Hovey, Tyson, and MacDonald, 2010; Nota, Santilli, Ginevra, and Soresi, 2013).

Fourth, whether a company implemented disability inclusive practices is based on self-reports and the quality of implementation is unknown. For example, a company may have reported a stay-at-work/return-to-work program, but the survey did not collect details to assess whether the program was implemented according to best practices for effective programs. This may explain why some practices were not associated with hiring, retention, or advancement. Moreover, the logistic regression analyses are correlational and do not necessarily indicate a causal link between practices and outcomes. It is entirely possible that companies that are inclined to hire, retain, and advance people with disabilities are also more likely to implement certain practices.

Finally, the self-report measure of federal contractor status may not precisely capture which companies are subject to Section 503. First, the measure does not indicate whether the company is a federal subcontractor, in which case it would be subject to the same requirements as prime contractors. Second, the measure does not consider whether the contract value is greater than $15,000 necessary for Section 503 to apply. These differences could potentially dilute differences between federal contractors and non-contractors in the analysis.

4.3 Implications

Knowledge of the demand-side factors that influence the employment of people with disabilities from this survey informs ODEP's outreach efforts to employers. The findings show that the percentage of companies that employ, recruit, and hire people with disabilities increased over the past decade. However, these increases were modest at best and the percentage of companies involved in these activities is too low, suggesting a continued need for outreach and educational efforts on disability employment targeted to employers.

The findings suggest that negative employer attitudes remain a major barrier to the employment of people with disabilities. This points to the importance of educational interventions for employers about people with disabilities. Research suggests that educational interventions in the workplace and higher education settings may be effective at changing attitudes, at least in the short-term (Kleynhans and Kotze, 2014; Hunt and Hunt, 2004; Oliviera and Pereira, 2017). Providing information that negates the concerns expressed by companies would hopefully change behavior and lead to increased hiring of people with disabilities. The concern expressed by most employers was safety of people with disabilities and their coworkers. It appears that employers could benefit from information about actual workplace accidents related to disabilities, either incurred by people with disabilities or coworkers, and from information on physical environment modifications and accommodations that could increase workplace safety. In addition, employers may benefit from information about management and supervision practices and training that could be provided to employees to increase workplace safety. While large companies have fewer concerns than small-and medium-sized companies, mid-level managers and supervisors may also benefit from additional information about people with disabilities to influence their decisions.

This study also informs ODEP on which disability inclusive practices should be promoted and which companies need them versus which companies are already "disability friendly." Implementing the practices identified in this study has the potential to increase the hiring, retention, and advancement of people with disabilities. ODEP should provide educational opportunities to companies about the best practices. These efforts should be targeted to small and goods-producing employers. Several of the practices that were not implemented by most companies were found to be related to hiring and employment. ODEP should highlight these effective practices that are used less often through its technical assistance centers.

College and university career centers was the top strategy used by companies to actively recruit people with disabilities. Because only 19 percent of students in postsecondary education have disabilities (U.S. Department of Education, 2017), companies that focus exclusively on college and university career centers as a recruitment source may be missing a potentially large talent pool of people with disabilities.

Finally, while this study was concerned with documenting demand-side factors that facilitate or impede the employment of people with disabilities, the results have implications for workforce development and vocational rehabilitation. The second most common concern expressed by employers was the ability of people with disabilities to perform required job duties. While this concern may in large part reflect misconceptions about people with disabilities, it may also have legitimacy. Young adults with disabilities are less likely to attend college (Sanford et al., 2011), and one survey found that 41 percent of people with disabilities who were not working said that they did not have enough education or training to get a job (Kessler Foundation, 2015). It is important to continue to focus federal workforce development efforts to improve the skills of people with disabilities to match the needs of employers. The Workforce Innovation and Opportunity Act includes increased focus on integrated, competitive employment and transition services and relationships between vocational rehabilitation and schools. This study indicates that it will be important to continue to strengthen the workforce development system disability services and the relationship between employers and the workforce development system to take a dual customer approach to the employment of people with disabilities.

4.4 Future Research

Continued research on demand-side factors is valuable for efforts to increase the employment of people with disabilities. Given the role played by employer attitudes, more research is needed on whether educational interventions designed to change workplace attitudes are effective and produce long-term positive changes in attitudes. Workplace educational interventions can include information, contact, and training (Kleynhans and Kotze, 2014; Hunt and Hunt, 2004; Oliviera and Pereira, 2017). The interventions should be targeted to coworkers and supervisors, both of whom play a key role in a receptive work environment. The implementation of such interventions would hopefully lead to the increased integration of people with disabilities in the workplace and a narrowing of the employment gaps with people without disabilities.

Research continues to demonstrate that people with disabilities are underrepresented in the workforce yet want to work. One study found that 68 percent of people with disabilities are striving to work, including preparing for employment, searching for jobs, and looking for more hours (Kessler Foundation, 2015). In a tight labor market, there can be opportunities for individuals with long-standing barriers who are willing to work. Employers benefit from hiring people with

disabilities by increasing access to a talented pool of potential workers. By continuing to conduct research on demand-side factors that influence the employment of people with disabilities, it may be possible to both increase the pool of job candidates available to employers as well as the employment of people with disabilities.

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Appendix A

Survey Methodology

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Appendix A
Survey Methodology

This appendix discusses the methodology used for the survey and includes:

1. Sample design;
2. Data collection procedures;
3. Response rate;
4. Nonresponse bias analysis;
5. Weighting; and
6. Variance estimation.

A.1 Sample Design

A.1.1 Target Population

The target population for the survey included all companies with at least five employees in 12 industries in the U.S. Employers with fewer than five employees, which are often one-person or family-based businesses that do not hire employees, as well as federal government agencies, were excluded from the target population. All North American Industry Classification System two-digit industry sector codes were included, with the exception of the following three industry sectors: 11: Agriculture, Forestry, Fishing, and Hunting; 21: Mining, Quarrying, and Oil and Gas Extraction; and 22: Utilities. These are the same industries included in the 2008 survey and were chosen at that time based on projected employment growth rates between 2002 and 2012 (Berman, 2004). The most recent data on employment growth from the U.S. Bureau of Labor Statistics are generally similar (Henderson, 2015).

In cases where a company had multiple establishments, the headquarters was included as the sampling unit. The research team decided to sample firms because human resources policies are made at the firm level. Single-location companies and headquarters of companies with multiple branches were used in the sampling frame. If a company was part of a subsidiary-parent relationship, both the subsidiary and the parent were included as sampling units.

A.1.2 Sampling Frame

The sampling frame for the survey was the Duns Market Identifiers File maintained by Dun & Bradstreet. The Duns Market Identifiers File contains basic company data, executive names and titles, mailing and location addresses, corporate linkages, D-U-N-S numbers, and employment and sales data on over 10 million U.S. business establishment locations, including public, private, and government organizations. The Duns Market Identifiers File is the only comprehensive, publicly available database to provide coverage of business establishments.

The sampling frame records contained the following fields from the DMI file: a D-U-N-S number; North American Industry Classification System or Standard Industrial Classification code; Federal Information Processing Standards state code; Standard Metropolitan Statistical Area code; number of employees at the location; total number of employees for the entire organization; status indicator (i.e., single location, headquarters, or branch); a subsidiary indicator; D-U-N-S numbers of the domestic topmost firm, headquarters, and parent (if a subsidiary); a hierarchy code to identify its location within the corporate structure; and DUNS Integrated Assigned Sequence code (a 9-digit field that sorts a corporate family tree into headquarters, branches, parents, and subsidiaries).

The Duns Market Identifiers File included both headquarters- and branch-level records. The Duns Market Identifiers Files defines a headquarters as a business establishment that has branches or divisions reporting to it and that is financially responsible for those branches or divisions. We included only the headquarters record for companies with multiple branches. Therefore, the sampling units were the single-location (a business establishment with no branches or subsidiaries reporting to it) companies and the headquarters of the companies that had multiple branches. Another corporate family linkage relationship provided by the Duns Market Identifiers File is the subsidiary to parent linkage. A subsidiary is a corporation with more than 50 percent of its capital stock owned by another corporation and will have a different legal business name from its parent company. The subsidiaries and parent companies were included as separate sampling units.

The Duns Market Identifiers File is widely used for business surveys but it is important to consider its limitations. The Duns Market Identifiers File is designed for market research rather than economic research. While comprehensive, the Duns Market Identifiers File is not nationally representative of U.S. companies. The primary source of company data in the Duns Market Identifiers File, which is updated monthly, is business credit inquiries (Haltiwanger et al., 2007). It is

impossible for the Dun & Bradstreet or anyone else to maintain a business list that is accurate at all times due to the continuous "births" and "deaths" of businesses. Several studies have evaluated the Duns Market Identifiers File and concluded that it suffers from coverage issues and inaccurate information on company records (Marker and Edwards, 1997; Moriarty and Chapman, 2000). For example, Moriarty and Chapman found that the Duns Market Identifiers File suffered from undercoverage of small establishments and overcoverage due to inclusion of companies that were no longer in business as well as inaccurate telephone numbers. To the extent that undercoverage of small companies exists in the file, some estimates may be biased upward to the extent that small companies are more disability inclusive. In addition to possible undercoverage of small companies, there may also be undercoverage of public administration employers in the file. We found that the number of public administration employers increased substantially in the past decade, however, suggesting improvements in coverage of employers in this sector. We also found that many companies were out of business. Both of these issues is discussed in more detailed later in this appendix. Both the Census Bureau and Bureau of Labor Statistics maintain businesses lists which are not made available for research conducted by other agencies. Therefore, we believe that the Duns Market Identifiers File is the best publically sampling frame for U.S. business surveys.

A.1.3 Stratification

The domains of interest were based on company size classes within the major industry sectors. Table A-1 shows the 12 industry sectors and their definitions in terms of 2012 North American Industry Classification System codes. The size classes were small, medium, large, and very large. The size classes were based on the total number of employees of the company, including employees in the branches for companies with multiple locations. A uniform set of size class boundaries was used for all industry sectors; that is, small (5-14 employees), medium (15-249 employees), large (250-999 employees), and very large (1,000 or more employees). There were a total of 48 (four size classes within 12 industry sectors) domains of interest. The companies were selected with equal probability within each size by industry sector stratum. The sample selection was independent across these sampling strata. After selecting the initial sample, the sampled records in each of the 48 employee size and industry sector strata were partitioned into approximately equal-sized random groups. These random groups were released in waves to the Westat Telephone Research Center (TRC) to conduct surveys, as needed.

Table A-1. Definition of major industry sectors by 2012 North American Industry Classification System codes

Industry sector	2012 North American Industry Classification System codes
Construction	23: Construction
Manufacturing	31-33: Manufacturing
Wholesale Trade, Transportation, and Warehousing	42: Wholesale Trade 48: Transportation 492: Couriers and Messengers 493: Warehousing and Storage
Retail Trade	44-45: Retail Trade
Information	51: Information
Financial Activities	52: Finance and Insurance 53: Real Estate and Rental and Leasing
Professional and Business Services	54: Professional, Scientific, and Technical Services 55: Management of Companies and Enterprises 56: Administration and Support and Waste Management and Remediation Services
Education	61: Education Services
Health Services	62: Health Care and Social Assistance
Leisure and Hospitality	71: Arts, Entertainment, and Recreation 72: Accommodation and Food Services
Other Services	81: Other Services
Public Administration	92: Public Administration

Although the size distribution of the companies may vary considerably across the major industry sectors, and consequently optimal size strata boundaries can differ across the industries, we used similar size classes uniformly across the industries. Larger companies were few but had a large share of employees and were oversampled. However, all companies were selected with equal probability within each stratum.

Differences from the 2008 Survey

While we tried to keep the sample design similar to the 2008 survey, two changes were implemented. First, while the 2008 survey used three size classes for stratification, the 2018 survey added a fourth category of 1,000 or more employees (very large). This fourth size class was included because ODEP was interested in understanding how the policies of very large companies differ from those in other size classes.

Second, some charges were made to the industry classification as well. The most recent data indicate the highest projected growth rates for construction and healthcare to 2024 and the largest decline

for manufacturing (Henderson, 2016). While healthcare and education were combined in the 2008 survey sampling, we revised the sampling to treat them as separate strata for the 2018 survey because of the large size and projected growth of the healthcare sector. To keep the number of industry classes at 12, transportation and warehousing were combined with wholesale trade because of the small size of these sectors (Henderson, 2016).

A.2 Data Collection Procedures

A.2.1 Pretest

The research team conducted a pretest of the questionnaire. If the respondent hesitated when responding during the pretest, we asked him/her to explain the difficulty he/she was having answering the question. We also asked respondents followup questions, such as if they had difficulty understanding certain terms, if any of the questions did not apply to them and why, and if there was something we did not ask but should have in order to better understand the employer perspective. We timed the length of questionnaire administration and determined that it did not vary significantly from the estimated administration time of 20 minutes. Once the pretest surveys were completed, we revised the questionnaire as needed.

A.2.2 Training Interviewers

Westat thoroughly trained the interviewers in all aspects of data collection, from initial contact procedures to survey administration to refusal avoidance and conversion. All Westat interviewers first completed an online, self-paced general interviewer training that covered topics important to all studies. Quizzes followed each module and required mastery of the material (100% correct) before the interviewer could advance. Next, interviewers participated in live training (accessed remotely) that was specific to the study and was guided by senior project staff. In this project-specific training, interviewers became familiar with the project topic and discussed each survey question to gain experience with the instrument and ensure consistency in how each question was delivered and how responses were recorded. In a third portion of training, interviewers were paired to role play survey administration for the study, with monitoring by project staff.

Telephone interviewers were supervised and monitored during the data collection period. Ten percent of all interviewer calls were monitored. Monitoring provided audio of the interviewer and respondent, as well as visual access to the interviewer's screen to observe the coding of responses. Supervisors discussed the results of each monitoring session with the interviewer immediately after the survey, including feedback and suggestions to improve the interviewer's techniques for gaining cooperation, asking questions, or recording responses. The results of monitoring sessions were reviewed on a weekly basis to identify any interviewers in need of additional supervision or support.

A.2.3 Survey Administration

Westat conducted the survey using computer-assisted telephone interviewing. An introductory letter was sent to sampled businesses. Westat sent all small and medium-sized businesses the advance letter prior to the interviewer's call. Large and very large businesses were called to obtain the name of the most senior knowledgeable respondent. That respondent was then sent the advance letter. The letter was on ODEP letterhead and signed by an official at ODEP. The goal of this letter was to introduce the study, emphasize confidentiality, and alert the respondents that an interviewer would be calling. A toll-free number was included so that respondents could call to verify the legitimacy of the study, ask questions, or set up an appointment for a survey.

Once the letter was sent, an interviewer called to complete the survey. If the interviewer was unable to speak with that respondent, he/she then determined the name of another knowledgeable respondent. In a large company, many of the survey questions were referred to human resources because its staff are responsible for recruiting employees with disabilities and tracking employee accommodations.

For each case in which the respondent refused to participate, the Telephone Research Center performed refusal conversion. Refusal conversion began with a letter urging the respondent to participate and explaining the importance of the study. The letter was also on ODEP letterhead and signed by an official at ODEP. A selected group of interviewers were trained in refusal conversion and recontacted the reluctant respondents.

A.2.4 Tracing

To learn more about the status of nonlocatable businesses, all nonlocatables in the first three release groups were selected for comprehensive tracing efforts. Nonlocatables included businesses with disconnected numbers, name changes, or multiple locations; cases where the person who answered the telephone had never heard of the business; and large businesses with interactive voice response prompts. Westat tracers located and verified contact information. Much of the business telephone and address information was outdated, and limited (if any) contact information was known for gatekeepers, human resources professionals, and owners. For this reason, we used a tiered approach to tracing and a wide variety of tracing resources to confirm or update business contacts and address and telephone information, including:

- Dunn & Bradstreet updates;
- Referrals from nearby local businesses;
- Internet database searches, including White Pages Premium, Department of Assessments and Taxation, and general Google searches; and
- Directory assistance.

When new information was captured, the tracers confirmed the company name, collected company information (merger, acquisition, buyout, out of business, owners, etc.), and identified the appropriate contact person.

A total of 380 companies in the first release group were nonlocatable and were selected for tracing. Of these cases, 364 companies were located, and 44 percent of these were found to be out of business. There was some variation across industry, ranging from 40 percent to 81 percent. Based on these results, the research team believed that many of the companies determined to be nonlocatable were, in all likelihood, out of business and ineligible for the survey. Therefore, when calculating the response rate for the survey, an adjustment factor was applied by industry sector to account for cases that could not be located, to reflect the fact that some nonlocatable cases did not exist or were otherwise ineligible for the survey.

A.2.5 In-Depth Interview Data Collection

The study also included in-depth interviews with 20 companies that responded to the survey. In consultation with ODEP, we selected companies with success in the hiring and retention of employees with disabilities, to help us understand the actual practices, successes, and challenges of disability employment. The companies were selected to ensure variation in company size and industry.

Selection of Companies

Responses to questions from the survey were used to identify companies that reportedly had an active disability employment culture, to understand the range of successful approaches to inclusive workplaces. Companies were required to have an employee with disabilities and to have hired, retained, or advanced an employee with disabilities. In addition, the survey asked each respondent whether he/she would be willing to participate in the in-depth interview, if selected. Only respondents who indicated that they were willing to participate in the in-depth interview were considered. Companies meeting the criteria were placed in a random order and contacted until 20 completed interviewers had been obtained. The number of completed interviews by company size and industry was as follows: small (6), medium (8), large (6), goods-producing (7), and service-providing (13).

Data Collection

A trained interviewer called the sampled companies to request that they participate in the qualitative interview. If the respondent agreed to participate, a date and time was scheduled. Interviews lasted up to 45 minutes and were conducted using the qualitative interview guide (Appendix D). The interviewer told the respondents that participation in the interview was voluntary and that responses would be private and would not be shared with anyone at the respondent's place of business, nor would the respondent's name or place of business be used in reporting the findings. The interviewer asked respondents for their permission to audio record the interviews; 5 of the 20 respondents declined to be recorded. After each interview was completed, the interviewer wrote a detailed summary of the interview, using the interview guide as a template for notes.

Analysis

The data from the qualitative interviews was coded into themes. The coding took place in two stages. In the first stage, information was organized as it related to the main topic areas of the interview guide. As researchers went through the information gathered by each interview, other unanticipated topics and themes were identified. These themes and topics were merged with the preliminary coding framework to develop a comprehensive framework that was used for the analysis of the qualitative data. The framework was based on the themes that appeared to reoccur, the patterns that were noticed, and any surprises or counterintuitive material. All data pertaining to a single issue (e.g., recruitment) were pooled and examined carefully. Within each single topic area, we identified the predominant themes, as well as those themes that were in the minority. The analysis of the interviews continued with the second stage of coding, which was more interpretive and involved identifying patterns between interviews. We also looked for themes that cut across single topic areas.

A.3 Response Rate

Table A-2 shows the major response categories defined by disposition codes and the number of sampled cases.

Table A-2. Major response categories, survey disposition codes, and the number of sampled cases

Response category/disposition code	No. of cases
1. Respondent – Completed Survey	**2,023**
C1: Complete Survey	2,023
2. Nonrespondent – In Scope – Eligibility Unknown	**11,814**
RB: Final Refusal	529
RD: Final Refusal – Do Not Call	340
RH: Hostile Refusal – Voxco	18
RM: Max Calls – Refusal	1,045
RN: Inbound Refusal	23
LM: Max Calls – Language	68
MC: Max Calls	4,279
NM: No Contact – Answering Machine in History	5,203
NP: Not Available in Field Period	309
3. In Scope – Ineligible in Survey	**826**
I3: Federal Government Agency	119
I4: Ineligible Other	5
I5: Less Than 5 Employees	621
I6: All Hiring Done Outside of U.S.	25
I8: Company Does No Hiring	56

Table A-2. Major response categories, survey disposition codes, and the number of sampled cases (continued)

Response category/disposition code	No. of cases
4. Nonrespondent – Unknown In Scope Status	**3,370**
NL: Not Locatable	3,186
NA: No Contact – Ring No Answer Only	182
NW: Non-working Phone Number	2
5. Out of Scope	**259**
OB: Out of Business	253
OD: Duplicate	6
Total	**18,292**

Source: Westat Survey Management System

In Table A-2, the first major response category includes respondents, who completed the survey. The second category includes in-scope nonrespondents, who were identified as being in business but were unable to conduct the survey. The third category includes in-scope companies that were identified as ineligible in the survey. The fourth category includes cases whose in-scope status could not be determined (mostly nonlocatables). The fifth category includes mostly the cases that were no longer in business.

The response rate was calculated using American Association of Public Opinion Research response rate 3. The response rate was calculated as:

$$R = 100 \times \frac{S_1}{S_1 + bS_2 + abS_4},$$

where

S_1 is the number of completed surveys,

S_2 is the number of in-scope nonrespondents whose eligibility could not be determined,

S_4 is the number of nonrespondents whose in-scope status could not be determined,

b is the estimated proportion of sample in-scope cases of unknown eligibility that were eligible, and

a is the estimated proportion of sample cases of unknown in-scope status that were in scope.

b is estimated as:

$$b = \frac{S_1}{S_1 + S_3}.$$

a is estimated as:

$$a = \frac{S_1 + S_2 + S_3}{S_1 + S_2 + S_3 + S_5},$$

where

S_3 is the number of in-scope sample cases that were determined to be ineligible in the survey and

S_5 is the number of sample cases that were identified as out of scope.

The response rate for this survey was calculated as 17.3 percent.

Differences in Response Rate from the 2008 Survey

The response rate for this survey was significantly lower than the response rate for the 2008 survey. The 2008 survey achieved a response rate of 50 percent. We believe that there are two possible explanations for this difference. First, we have noted a deterioration in the quality of the DMI file compared to the version used for the 2008 survey administration. For example, many of the contacted business were out of business, and tracing efforts led to the discovery that, in some cases, these businesses had been closed for several years before the sample was provided. Second, we noted an increase in the number of companies using IVR systems that allowed no access using an individual's name and/or extension, as well as cases where company policy prohibited the operator from transferring a call without a name or extension. In these cases, we used online search tools that would sometimes identify key employee names and direct telephone numbers. This decline in response rate has been observed for other establishments that use the DMI. For example, the employer survey conducted as part of the Family Medical Leave Act Surveys achieved a response rate of 65 percent in 2000 (Cantor et al., 2001) and 21 percent in 2012 (Daley et al., 2012).

A.4 Nonresponse Analysis

A.4.1 Comparison of Easy- and Hard-to-Reach Respondents

The research team conducted two types of nonresponse analysis. The first nonresponse analysis compared the characteristics of companies that were easier to reach with those that were harder to reach. This analysis was based on the premise that harder-to-reach companies might be more similar to nonrespondents than those that were easier to reach. If harder-to-reach companies did not differ from easier-to-reach companies, then it might be that there were few differences between respondents and nonrespondents. In contrast, if harder-to-reach companies differed from easier-to-reach companies, this might suggest nonresponse bias. Even if there were differences, the differences might not suggest nonresponse bias unless they persisted when we conditioned on variables that were included in weighting adjustments.

The analysis included three measures. The first measure was based on the number of call attempts and divided the sample into two groups: companies that completed the survey in three or fewer calls and those that completed the survey in four or more calls. The latter group was considered to represent hard-to-contact companies, whereas the former was considered to represent easy-to-contact companies. The number of call attempts ranged from 1 to 19. The mean number of call attempts was 4.75. About 55 percent of companies responded within three or fewer call attempts; the remaining 45 percent required four or more call attempts. As discussed, we conducted refusal conversion for companies with an initial soft refusal. A second measure indicated whether a company was a converted refusal. Companies without a converted refusal were considered amenable, and those with a refusal were considered reluctant. About 12 percent of the responding companies were a converted refusal. A third measure combined ease of contact and amenableness by dividing the sample into two groups: early and late respondents. The early group included companies that completed the survey within 1 month, and the late group includes those that completed it within more than 1 month.

Table A-3 shows that there were several differences between easier- and harder-to-contact companies. The easy-to-contact and hard-to-contact groups differed by company size. Companies that completed the survey on the fourth or later call were more likely to be large or very large companies (24% and 12%, respectively) compared to those that completed it on fewer calls (17%

and 8%, respectively). Similarly, companies in the late respondent group were more likely to be large or very large (24% and 13%, respectively) than those in the early response group (17% and 7%, respectively). This pattern is related to the fact that larger companies were more likely to have gatekeepers or interactive voice response systems and to require an appointment with the respondent to complete the survey. Sample units that were headquarters of companies with multiple locations were harder to reach than those that were single-location companies. Forty-three percent of companies in the hard-to-contact group were headquarters, compared to 35 percent of companies in the easy-to-contact group. This finding may be explained by the fact that, like larger companies, those with multiple locations may have required additional calls to reach the correct location and respondent. There were no differences in any of the measures by industry, region, or whether the company was a subsidiary.

Easy- and hard-to-reach companies also differed significantly with regard to the employment, recruitment, and hiring of people with disabilities. Companies in the late respondent group were more likely than those in the early respondent group to have employees with a disability (39% and 30%, respectively). Companies in the hard-to-reach group were more likely than those in the easy-to-reach group to have hired a person with a disability in the past 12 months (21% and 18%, respectively). Similarly, companies in the late respondent group were more likely than those in the early respondent group to have hired a person with a disability (21% and 17%, respectively). There were no differences between any of the measures by whether companies actively recruited people with disabilities. The finding that hard-to-reach companies were more likely to have employees with disabilities and to have recently hired a person with a disability is somewhat contrary to expectation. We might have expected that companies that employed individuals with disabilities would have been interested in the topic, would have been easier to reach, and would have responded early, which creates concern about bias due to overrepresentation of companies that have experience with disability employment. The fact that hard-to-reach companies were more likely to have employees with disabilities may be related to the fact that these were larger companies, which are often harder to reach.

One problem with the bivariate analysis above is that companies that are easy/hard to reach may differ along multiple dimensions, making it difficult to isolate the influence of any one company characteristic. For example, companies that were hard to contact were more likely to hire people with disabilities than those that were easy to contact, but it is difficult to tell whether this is due to

the fact that larger companies, which were more likely to employ people with disabilities, also required more effort to contact for other reasons.

To address this issue, we used multiple regression analysis to look at the joint effect of all company characteristics. The dependent variables were hard to contact (4 or more call attempts), reluctant (converted refusal), and late responder. Logistic regression analysis was used because of the binary dependent variables. The independent variables were company size, industry, status, subsidiary, and indicators for whether the company had any employees with disabilities, actively recruits people with disabilities, and had hired anyone with a disability in the past 12 months.

Table A-3. Company characteristics by easier-to-reach and harder-to-reach dimensions

	Ease of contact (%)		Reluctance (%)		Response timing (%)	
Company characteristic	Easy to contact	Hard to contact	Amenable	Refusal	Early	Late
Company size[a,b]						
Small	33.7	28.9	31.7	30.5	35.6	28.1
Medium	40.5	34.6	38.1	36.4	40.5	35.7
Large	17.4	24.2	20.4	20.8	16.8	23.6
Very large	8.3	12.4	9.9	12.3	7.2	12.7
Industry						
Goods-producing	16.8	17.7	17.0	18.6	17.6	16.9
Service-providing	70.5	69.8	70.0	72.0	70.5	69.9
State and local government	12.7	12.4	13.0	9.3	12.0	13.1
Census region						
Northeast	16.9	17.6	17.5	14.8	16.9	17.4
Midwest	26.0	25.0	25.2	28.0	23.8	27.1
South	35.8	36.9	36.3	36.4	37.5	35.3
West	21.4	20.5	21.0	20.8	21.8	20.2
Corporate structure[c,d]						
Single location	64.7	57.5	61.8	58.5	67.5	56.3
Headquarters of multiple-location company	35.3	42.5	38.2	41.5	32.6	43.8
Subsidiary [e,f]						
Yes	8.1	10.7	9.0	11.4	7.6	10.7
No	91.9	89.3	91.1	88.6	92.4	89.3
Any employees with a disability [g]						
Yes	33.5	36.1	35.0	32.2	30.3	38.5
No	55.4	50.9	52.9	57.2	57.4	49.9
I'm not sure/refused	11.0	13.0	12.1	10.6	12.3	11.6
Actively recruits people with disabilities						
Yes	25.1	27.6	8.5	6.4	8.6	8.0
No	66.1	64.8	26.6	23.3	24.6	27.7
Don't know/refused	8.8	7.6	64.9	70.3	66.8	64.3
Hired people with disabilities in past 12 months[h,i]						
Yes	17.7	20.6	19.2	17.4	16.9	20.8
No	67.4	60.7	64.1	66.5	68.3	60.9
I'm not sure	15.0	18.7	16.7	16.1	14.8	18.3

Source: 2018 survey and survey metadata

Note: The easy-to-contact group consisted of companies that responded in three or fewer call attempts. The hard-to-contact group consisted of companies that responded in four or more call attempts.

[a] Chi-square test for the difference in company size by ease of contact is significant at $p < 0.05$.

[b] Chi-square test for the difference in company size by response timing is significant at $p < 0.05$.

[c] Chi-square test for the difference in corporate structure by ease of contact is significant at $P < 0.05$.

[d] Chi-square test for the difference in corporate structure by response timing is significant at $p < 0.05$.

[e] Chi-square test for the difference in subsidiary status by ease of contact is significant at $p < 0.05$.

[f] Chi-square test for the difference in subsidiary status by response timing is significant at $p < 0.05$.

[g] Chi-square test for the difference in having any employees with disabilities by response timing is significant at $p < 0.05$.

[h] Chi-square test for the difference in hiring a person with a disability in the past 12 months by ease of contact is significant at $p < 0.05$.

[i] Chi-square test for the difference in hiring a person with a disability in the past 12 months by response timing is significant at $p < 0.05$.

The regression results are shown in Table A-4. The regression analysis shows that the only variable significantly related to any of the easy-/hard-to-reach dimensions is company size. Specifically, large and very large companies were more likely to be in the hard-to-contact group, and very large companies were more likely to be late responders. As was the case in the bivariate analysis, none of the company characteristics were related to reluctance. The measures of disability employment, recruitment, and hiring were unrelated to any of the easy-/hard-to-reach dimensions once we had controlled for company size.

Table A-4. Logistic regression analysis predicting easy-/hard-to-reach dimensions

	Hard to contact		Reluctant		Late responder	
Company characteristic	**Estimate**	**SE**	**Estimate**	**SE**	**Estimate**	**SE**
Intercept	-0.10	0.101	-2.14***	0.159	0.24*	0.103
Company size (Base = Small)						
Size = Medium	-0.25**	0.081	-0.13	0.124	-0.20*	0.082
Size = Large	0.21*	0.097	0.03	0.149	0.14	0.099
Size = Very large	0.26*	0.128	0.24	0.188	0.32*	0.134
Industry (Base = Goods-producing)						
Industry = Service-providing	0.02	0.068	0.14	0.109	0.02	0.068
Industry = Public administration	-0.10	0.098	-0.30	0.167	-0.05	0.099
Census region (Base = West)						
Census region = Northeast	0.05	0.090	-0.16	0.147	0.03	0.091
Census region = Midwest	-0.03	0.079	0.13	0.120	0.12	0.080
Census region = South	0.02	0.071	0.02	0.110	-0.08	0.071
Headquarters	0.03	0.062	0.08	0.094	0.10	0.062
Subsidiary	0.04	0.083	0.14	0.119	0.03	0.085

Table A-4. Logistic regression analysis predicting easy-/hard-to-reach dimensions (continued)

Company characteristic	Hard to contact		Reluctant		Late responder	
	Estimate	SE	Estimate	SE	Estimate	SE
Any employees with disability (Base = No)						
Yes	-0.11	0.082	-0.09	0.130	0.12	0.082
Don't know	0.09	0.099	-0.08	0.160	-0.12	0.100
Hired people with disabilities in past 12 months (Base = No)						
Yes	0.06	0.092	-0.04	0.146	-0.02	0.093
Don't know	0.05	0.090	0.01	0.142	0.07	0.092
Actively recruits people with disabilities (Base = No)						
Yes	-0.18	0.114	-0.16	0.193	-0.09	0.113
Don't know	0.07	0.084	-0.03	0.139	0.01	0.084

Source: 2018 survey and metadata

SE, standard error.

* p < 0.05, ** p < 0.01, *** p < 0.001.

N = 2,022 companies for hard-to-contact and reluctant models; N = 2,021 for the late responder model.

In summary, the results suggest that easy- and hard-to-reach companies are relatively similar. The only variable related to the easy-/hard-to-reach dimensions was company size, which was included in the nonresponse weighting adjustments. There is no evidence that easy-/hard-to-reach companies differ on variables related to disability employment after controlling for other company characteristics. To the extent that hard-to-reach companies resemble nonrespondents, this analysis provides some support for the view that nonresponse bias may not be a concern.

A.4.2 Comparison of Responding and Nonresponding Companies

The second nonresponse analysis compared the characteristics of companies that responded with those that did not respond. This analysis used multiple regression analysis to identify the most powerful predictors of nonresponse when all company characteristics were taken into consideration simultaneously.

The analysis considered three different types of nonresponse: refusal, noncontact (companies that were in scope but with unknown eligibility status) and nonlocatable (those with an unknown in-scope status because the company could not be reached). Multinomial logistic regression analysis was used to identify the predictors of each type of nonresponse relative to response. Multinomial logistic regression analysis is used to model outcomes that are polytomous (i.e., have more than two

qualitative categories). Multinomial logistic regression analysis provides a set of coefficients for three comparisons: refusal versus respondent, noncontact versus respondent, and nonlocatable versus respondent. Predictor variables were limited to those on the Duns Market Identifiers file and included company size, industry, Census region, status, and subsidiary status. The model included all cases except those that were ineligible or out of scope.

Table A-5 shows the results of the estimated multinomial logistic regression model. The results show that several variables were important predictors of various types of nonresponse. In general, company size was a very important predictor of nonresponse regardless of the type of nonresponse. Very large companies were more likely to be refusals, noncontacts, and nonlocatables than respondents. Industry was also strongly related to nonresponse. Service-providing industries were the most likely to be nonrespondents regardless of nonresponse type, and public administration agencies were the least industry to be nonrespondents due to refusal and noncontact. This outcome may indicate that state and local government agencies felt some obligation to complete the survey and that it may have been easier to identify and speak with the correct respondent within those agencies. The fact that state and local government agencies were no more likely to be nonlocatable than goods-producing companies is likely due to the fact that they are less likely to go out of business. The Northeastern companies were generally most likely to be nonresponders. Compared to companies that were single locations, sample units that were the headquarters of multiple-location companies had lower levels of nonresponse due to being nonlocatable. Finally, subsidiaries were more likely to be each type of nonrespondent. Subsidiary refusals may be explained in part by a respondent's reluctance to answer questions about disability hiring without the approval of the parent company, where nonlocatable status may be explained by business mergers that were not reflected in the Duns Market Identifiers File. For example, a subsidiary may have fully merged with the parent company.

In sum, the nonresponse analysis does not provide evidence of nonresponse bias on company characteristics that were not included in the weighting adjustments described below. A multiple regression analysis of three dimensions of easy-/hard-to-reach status showed that few company characteristics were related to hard-to-reach status. The only company characteristic that was significantly related to some of the dimensions was company size. A regression predicting nonresponse found that several characteristics, including company size, industry, status, and subsidiary status, were significant predictors of several types of nonresponse. Company size and

these other characteristics were all included in nonresponse weighting adjustments, as discussed in the next section. However, it is important to note that because the company characteristics available in the Duns Market Identifiers file are quite limited, there is still the potential for nonresponse bias on variables that could not be included in the analysis. The next section discusses the weighting procedures, including nonresponse adjustments that were undertaken.

Table A-5. Multinomial logistic regression analysis of nonresponse

	Refusal		Noncontact		Nonlocatable	
Company characteristic	Estimate	SE	Estimate	SE	Estimate	SE
Intercept	-0.10	0.064	1.78***	0.047	0.78***	0.052
Company size (Base = Small)						
Medium	-0.49***	0.059	-0.60***	0.044	-0.50***	0.052
Large	-0.05	0.066	0.13**	0.051	-0.05	0.059
Very large	0.46***	0.082	0.74***	0.066	0.57***	0.074
Industry (Base = Goods-producing)						
Service-providing	0.41***	0.055	0.17***	0.037	0.19***	0.043
Public administration	-0.69***	0.088	-0.23***	0.054	-0.12	0.063
Census region (Base = West)						
Northeast	0.21***	0.061	0.15**	0.049	0.14*	0.056
Midwest	-0.17**	0.058	-0.11*	0.044	-0.18**	0.051
South	-0.07	0.050	-0.09*	0.039	-0.02	0.045
Headquarters	-0.09	0.045	-0.06	0.034	-0.28***	0.040
Subsidiary	0.21***	0.054	0.27***	0.044	0.51***	0.048

Source: 2018 survey and Survey Management System data

SE, standard error.

* p < 0.05, ** p < 0.01, *** p < 0.001.

N = 17,202.

A.5 Weighting

A.5.1 Sampling Weights

The sampling weight is attached to every company record with a completed survey (1) to account for differential probabilities of selection across the industry/size sampling strata and (2) to reduce bias resulting from nonresponse. The sampling weights are necessary for unbiased estimation of the population characteristics of interest in this survey.

The first step in estimation of the sampling weights was to derive a base weight, which is the reciprocal of the company's probability of selection. Then, the base weights were adjusted for

nonresponse to reduce biases resulting from the inability to complete a survey with every company in the sample. These adjustments were made by redistributing the weights of nonresponding companies to responding companies with similar propensities for nonresponse. A predictive model for response propensity was developed to identify subgroups of population with differential response rates within industry/size sampling strata. These subgroups were then used as nonresponse adjustment cells, and a separate weight adjustment was applied in each cell. The potential predictors that can be used in this modeling effort have to be known for both respondents and nonrespondents. These include major industry sector, company employee size classes, Census region, MSA/non-MSA status, and single-location company or headquarters identifier for the company.

If response propensity is independent of survey estimates within nonresponse adjustment cells, then nonresponse-adjusted weights yield unbiased estimates. There are several alternative methods of forming nonresponse adjustment cells to achieve this result. We used the Chi-Square Automatic Interaction Detector to guide us in forming the cells. This method partitions data into homogenous subsets with respect to response propensity. To accomplish this, it first merges values of the individual predictors, which are statistically homogeneous with respect to the response propensity and maintains all other heterogeneous values. It then selects the most significant predictor (with the smallest p-value) as the best predictor of response propensity and thus forms the first branch in the decision tree. It continues applying the same process within the subgroups (nodes) defined by the "best" predictor chosen in the preceding step. This process continues until no significant predictor is found or a specified minimum node size (about 20) is reached. The procedure is stepwise and creates a hierarchical tree-like structure.

All sample companies were classified into five major survey response categories based on the outcome of the survey. These five categories were:

1. Respondent – survey completed;
2. Nonrespondent, identified as in scope (in business) but eligibility (based on the interview) could not be determined (company name and being in business were verified but the interviewer was not able to conduct the survey);
3. Identified as in scope (in business) but determined to be ineligible in the survey;
4. In-scope (in business) status could not be verified (mainly nonlocatable cases); and
5. Out of scope (no longer in business).

We developed separate models for the nonresponding companies with unknown in-scope status (nonlocatables) and for the nonresponding in-scope companies. After forming two separate sets of adjustment cells, we first adjusted the weights to compensate for nonresponding companies with unknown in-scope status. This weight adjustment factor was computed within each adjustment cell, as the ratio of the weighted (by the base weight) total number of sampled companies to the weighted number of companies whose in-scope status could be determined. In the second step, we adjusted the weights to compensate for nonresponding in-scope companies. This nonresponse adjustment factor was computed as the ratio of the weighted (after adjusting for nonlocatables) number of all in-scope companies (including those identified as ineligible in the survey) to the weighted number of companies whose eligibility could be determined (the companies with a completed survey plus those that were identified as ineligible in the survey) within each nonresponse adjustment cell. Next, we discuss each weight adjustment in detail and present the formulae.

A.5.2 Adjusting the Weights to Compensate for Nonresponding Cases with Unknown In-Scope Status (nonlocatables)

First, the weights were adjusted to compensate for nonresponding cases with unknown in-scope status (nonlocatables). The adjustment factor for the adjustment class c (λ_c) was computed as:

$$\lambda_c = \frac{\sum_{i \in S_{1c}} W_{ci}^B + \sum_{i \in S_{2c}} W_{ci}^B + \sum_{i \in S_{3c}} W_{ci}^B + \sum_{i \in S_{4c}} W_{ci}^B + \sum_{i \in S_{5c}} W_{ci}^B}{\sum_{i \in S_{1c}} W_{ci}^B + \sum_{i \in S_{2c}} W_{ci}^B + \sum_{i \in S_{3c}} W_{ci}^B + \sum_{i \in S_{5c}} W_{ci}^B},$$

where

S_{1c} is the set of companies with a completed survey in adjustment class c,

S_{2c} is the set of nonresponding in-scope companies in adjustment class c,

S_{3c} is the set of companies that were identified as ineligible in the survey in adjustment class c,

S_{4c} is the set of sampled cases with undetermined in-scope status (nonlocatables) in adjustment class c,

S_{5c} is the set of out-of-scope (no longer in business) sample cases in adjustment class c, and

W_{ci}^B is the base weight for company record i in adjustment class c.

Then, the weight adjusted for the nonresponding cases with unknown in-scope status (nonlocatables) for sampled record *i* in adjustment class *c*, (W_{ci}^{U}), was computed as:

$$W_{ci}^{U} = W_{ci}^{B} \times \lambda_{c} .$$

A.5.3 Adjusting the Weights for Nonresponding In-Scope Companies

After forming the nonresponse adjustment cells, the weights were adjusted to compensate for the nonresponding in-scope companies. This nonresponse adjustment factor for cell α, δ_{α} was computed as:

$$\delta_{\alpha} = \frac{\sum_{i \in S_{1\alpha}} W_{\alpha i}^{U} + \sum_{i \in S_{2\alpha}} W_{\alpha i}^{U} + \sum_{i \in S_{3\alpha}} W_{\alpha i}^{U}}{\sum_{i \in S_{1\alpha}} W_{\alpha i}^{U} + \sum_{i \in S_{3\alpha}} W_{\alpha i}^{U}},$$

where

S_{1a} is the set of companies with a completed survey in adjustment class *a*,

S_{2a} is the set of nonresponding in-scope companies in adjustment class *a,*

S_{3a} is the set of companies that were found to be ineligible during the survey in adjustment class *a,* and

$W_{\alpha i}^{U}$ is the weight adjusted for unknown in-scope cases for provider *i* in adjustment class *a.*

Then, the final nonresponse-adjusted weight was computed by multiplying the weight that was adjusted for the nonresponding cases with unknown in-scope status by the nonresponse adjustment factor. The final nonresponse-adjusted sample weight for company *i* in nonresponse adjustment class α, $W_{\alpha i}^{F}$, was computed as follows:

$$W_{\alpha i}^{F} = W_{\alpha i}^{U} \times \delta_{\alpha} .$$

A.5.4 Adjusting the 2008 Weights

Estimates for three measures—the percentage of companies that employ people with disabilities, the percentage of companies that actively recruit people with disabilities, and the percentage of companies that hired a person with a disability in the past year—were compared to the estimates from the 2008 survey. The 2018 Duns Market Identifiers file used as the sampling frame had three times the number of public administration firms as in 2008. Much of this increase was due to an increase in small public administration firms. A Dun & Bradstreet representative indicated that public administration firms have been underrepresented in the Duns Market Identifiers file and Dun & Bradstreet has made efforts over the past decade to increase the inclusion of these firms. Differences in the coverage of public administration firms between the two years makes comparisons over time problematic, especially for the public administration stratum. To address potential undercoverage bias and enable valid comparisons over time, the 2008 sampling weights were poststratified based on the industry by size marginal totals in the 2018 Duns Market Identifiers file. Estimates from the 2008 survey included in this report thus differ slightly from those published in the 2008 report. The differences are small and largely confined to the public administration sector.

A.6 Variance Estimation

To account for the complex design of the survey, we used Taylor series approximation. Taylor series is a widely used method for estimating variances in complex surveys. A Taylor series linearization of a statistic is formed and then substituted into the formula for calculating the variance of a linear estimate appropriate for the sample design. The Taylor series method relies on the simplicity associated with estimating the variance for a linear statistic even with a complex sample design (Wolter, 1985). SAS software is designed to produce variance estimates for complex surveys using the Taylor series method, using the WEIGHT and STRATA statements in PROC SURVEYFREQ and PROC SURVEYMEANS. Standard errors and resulting statistical significance tests presented in this report were calculated using these procedures in SAS.

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Appendix B

Standard Errors

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Appendix B
Standard Errors

Table B-1. Standard errors for Table 2-1: Characteristics of companies and respondents

Characteristic	2008 SE (n)	2018 SE (n)
Company size		
Small (5-14)	0.5 (1,262)	1.3 (596)
Medium (15-249)	0.5 (1,280)	1.4 (853)
Large (250 or more)	0.4 (1,255)	0.5 (574)
Industry		
Goods-producing	0.3 (588)	0.4 (364)
Service-providing	0.3 (2,823)	0.4 (1,405)
Public administration	0.1 (386)	0.1 (254)
Federal contractor		
Yes	N/A	0.7 (202)
No	N/A	0.8 (1,782)
Don't know/refused	N/A	0.4 (39)
Company structure		
Single-location company	0.6 (2,468)	0.8 (1,243)
Headquarters	0.6 (1,329)	0.8 (780)
Subsidiary		
Yes	N/A	0.6 (187)
No	N/A	0.6 (1,836)
Census region		
Northeast	N/A	1.3 (353)
Central	N/A	1.5 (518)
Southeast	N/A	1.5 (729)
West	N/A	1.3 (423)

Table B-1. Standard errors (SEs) for Table 2-1: Characteristics of companies and respondents (continued)

Characteristic	2008 SE (n)	2018 SE (n)
Plans for workforce in next 12 months		
We plan to increase the size of our workforce	N/A	1.5 (666)
We have no plans to increase or decrease the size of our workforce	N/A	1.6 (1,255)
We plan to reduce the size of our workforce	N/A	0.6 (75)
Don't know/refused	N/A	0.3 (27)
Years at current employer		
Less than 5	1.2 (1,322)	1.5 (659)
6-10	1.0 (814)	1.2 (331)
11-20	1.1 (941)	1.4 (505)
More than 20	0.9 (704)	1.4 (524)
Don't know/refused	0.2 (16)	0.1 (4)
Regularly interacts with someone with a disability inside the work environment		
Yes	N/A	1.6 (1,343)
No	N/A	1.6 (633)
Don't know/refused	N/A	0.5 (47)
Regularly interacts with someone with a disability outside the work environment		
Yes	N/A	1.3 (1,702)
No	N/A	1.3 (305)
Don't know/refused	N/A	0.3 (16)

Source: 2018 survey Q1, Q2, Q3, Q4, Q7; 2018 survey Q1, Q2, Q3, Q6, Q9, Q10, Q11, Q14, Q15.

Cells with "N/A" indicate that data were not available for 2008.

Table B-2. Standard errors (SEs) for Figure 3-1: Percentage of companies that employed people with disabilities, by size and industry

Employed people with disabilities	All SE (N)	Company size			Industry		
		Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)
Employed people with disabilities – 2018	1.3 (702)	1.6 (73)	2.0 (257)	4.3 (372)	2.4 (97)	1.5 (492)	3.8 (113)
Employed people with disabilities – 2008	1.0 (1,148)	0.6 (132)	0.8 (293)	0.3 (723)	0.3 (155)	0.9 (847)	0.1 (146)

Source: 2008 survey Q10; 2018 survey Q16.

Table B-3. Standard errors (SEs) for Table 3-1: Percentage of companies that employed people with disabilities, by detailed industry

Industry	SE (N)
Construction	3.3 (41)
Manufacturing	3.5 (56)
Wholesale Trade, Transportation, and Warehousing	3.5 (38)
Retail Trade	3.5 (50)
Information	4.9 (34)
Financial Activities	4.1 (26)
Professional and Business Services	3.3 (44)
Educational Services	4.9 (92)
Health Care and Social Assistance	3.4 (71)
Leisure and Hospitality	4.5 (72)
Personal Services	3.8 (65)
Public Administration	3.8 (113)

Source: 2018 survey Q16.

Table B-4. Standard errors (SEs) for Table 3-2: Among companies that employed people with disabilities, percentage of employees with a disability, by size and industry

Percentage of employees with a disability	All SE (N)	Company size			Industry		
		Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)
10% or more	2.5 (62)	7.7 (31)	1.6 (16)	2.4 (15)	5.3 (7)	2.9 (49)	2.9 (6)
5-9%	2.6 (101)	6.4 (10)	3.4 (42)	4.9 (49)	4.6 (10)	3.1 (73)	5.4 (18)
3-4%	2.3 (110)	2.0 (3)	3.4 (38)	4.4 (69)	5.2 (22)	2.6 (77)	2.0 (11)
1-2%	2.6 (191)	3.5 (12)	4.0 (91)	4.6 (88)	6.4 (25)	3.0 (135)	6.8 (31)
Less than 1%	2.8 (155)	6.0 (13)	3.5 (61)	6.0 (81)	6.0 (22)	3.2 (107)	6.7 (26)
Don't know/Refused	1.2 (83)	1.7 (4)	1.8 (9)	3.1 (70)	1.9 (11)	1.4 (51)	8.2 (21)

Source: 2018 survey Q17.

Table B-5. Standard errors (SEs) for Figure 3-2: Percentage of companies that track the number of employees with disabilities, by size and industry

Tracks number of people with disabilities	All SE (N)	Company size			Industry		
		Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)
Track the number of employees with disabilities	1.3 (479)	2.0 (98)	1.6 (175)	4.8 (206)	2.2 (95)	1.5 (318)	3.2 (66)

Source: 2018 survey Q18.

Table B-6. Standard errors (SEs) for Figure 3-3: Percentage of companies that actively recruit people with disabilities, by size and industry

Actively recruit people with disabilities	All SE (N)	Company size			Industry		
		Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)
Actively recruit people with disabilities – 2018	1.2 (531)	1.6 (71)	1.8 (200)	4.8 (260)	2.0 (89)	1.4 (345)	3.8 (97)
Actively recruit people with disabilities – 2008	0.8 (840)	0.6 (124)	0.7 (234)	0.2 (479)	0.2 (107)	0.8 (595)	0.1 (138)

Source: 2008 survey Q14; 2018 survey Q22

Table B-7. Standard errors (SEs) for Table 3-3: Among companies that actively recruit people with disabilities, percentage of companies that use different strategies to recruit people with disabilities

Strategy	All SE (N)	Company size			Industry		
		Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)
Partnerships with disability-related advocacy organizations	3.6 (258)	7.3 (22)	4.6 (75)	4.5 (161)	7.7 (38)	4.2 (176)	6.2 (44)
Contacting college and university career centers when vacancies arise	3.5 (394)	8.0 (33)	4.0 (142)	3.9 (219)	6.1 (68)	4.1 (260)	7.0 (66)
Postings at disability-related publications or websites	3.4 (214)	7.2 (16)	4.3 (70)	7.4 (128)	6.1 (36)	4.0 (136)	7.5 (42)
Postings or tables at disability-related job fairs	2.4 (112)	3.7 (3)	3.2 (30)	7.2 (79)	3.8 (11)	2.8 (82)	5.2 (19)
Establishing summer internships and mentoring programs	2.4 (87)	5.0 (10)	2.6 (32)	8.5 (45)	2.4 (6)	2.8 (64)	4.9 (17)
Postings at Department of Vocational Rehabilitation	2.4 (166)	4.2 (10)	3.2 (41)	7.3 (115)	7.1 (29)	2.7 (97)	5.3 (40)
Postings at job service or workforce employment center	3.2 (349)	6.5 (31)	4.6 (117)	6.1 (201)	5.9 (72)	3.7 (210)	7.2 (67)

Source: 2018 survey Q23.

Table B-8. Standard errors (SEs) for Table 3-4: Among companies that do not actively recruit people with disabilities, percentage of companies reporting different reasons for not recruiting

Reason	All SE (N)	Company size			Industry		
		Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)
Absence of job openings	1.8 (746)	2.5 (378)	2.5 (297)	6.0 (71)	3.4 (142)	2.1 (528)	5.2 (76)
Not sure how to actively recruit people with disabilities	1.8 (484)	2.5 (157)	2.5 (243)	5.3 (84)	3.2 (99)	2.1 (354)	3.7 (31)
Architectural barriers or lack of special equipment	1.7 (333)	2.5 (130)	2.3 (149)	4.1 (54)	3.1 (82)	1.9 (225)	3.9 (26)
Takes too much time	0.9 (46)	1.5 (21)	0.8 (19)	0.7 (6)	1.1 (7)	1.1 (35)	1.3 (4)
Costs too much money to hire people with disabilities	0.8 (28)	1.4 (14)	0.7 (13)	0.1 (1)	1.0 (6)	1.0 (20)	1.3 (2)

Source: 2018 survey Q24.

Table B-9. Standard errors (SEs) for Figure 3-4: Percentage of companies that hired people with disabilities in the past 12 months, by size and industry

Hired people with disabilities in the past 12 months	All SE (N)	Company size			Industry		
		Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)
Hired people with disabilities in the past 12 months – 2018	1.1 (384)	1.3 (35)	1.8 (135)	4.9 (214)	1.8 (44)	1.3 (282)	3.4 (58)
Hired people with disabilities in the past 12 months – 2008	0.7 (542)	0.4 (70)	0.5 (116)	0.3 (356)	0.2 (58)	0.7 (426)	0.1 (58)

Source: 2008 survey Q12; 2018 survey Q19.

Table B-10. Standard errors (SEs) for Table 3-5: Percentage of companies reporting benefits of hiring people with disabilities, by size and industry

Benefit	All SE (N)	Company size			Industry		
		Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)
Increases morale	1.6 (949)	2.5 (214)	2.2 (388)	4.5 (347)	2.8 (117)	1.9 (695)	4.3 (137)
Increases productivity	1.2 (464)	1.8 (103)	1.8 (191)	4.2 (170)	1.9 (57)	1.4 (334)	3.3 (73)
Projects a positive image with prospective employees	1.5 (1,579)	2.5 (415)	1.8 (655)	2.9 (509)	3.0 (256)	1.7 (1,105)	3.8 (218)
Projects a positive image with customers	1.5 (1,552)	2.5 (419)	1.8 (649)	3.4 (484)	3.0 (239)	1.7 (1,094)	3.7 (219)
Increases the pool of qualified candidates	1.6 (1,378)	2.5 (348)	2.1 (567)	4.7 (463)	3.1 (213)	1.9 (965)	4.0 (200)
Provides financial incentives such as tax breaks for accommodation	1.5 (598)	2.3 (178)	2.1 (227)	4.6 (193)	2.8 (115)	1.8 (429)	2.6 (54)
Reduces liability for legal issues related to lack of diversity	1.5 (758)	2.3 (195)	2.2 (287)	4.8 (276)	2.9 (129)	1.8 (520)	4.1 (109)

Source: 2018 survey Q28.

Table B-11. Standard errors (SEs) for Table 3-6: Percentage of companies reporting benefits of hiring people with disabilities, by whether companies actively recruit people with disabilities

Benefit	All SE (N)	Actively recruits people with disabilities	
		Actively recruits SE (N)	Does not actively recruit SE (N)
Increases morale	1.6 (949)	3.7 (348)	1.8 (535)
Increases productivity	1.2 (464)	3.5 (211)	1.3 (223)
Projects a positive image with prospective employees	1.5 (1,579)	2.8 (481)	1.8 (973)
Projects a positive image with customers	1.5 (1,552)	2.3 (465)	1.8 (971)
Increases the pool of qualified candidates	1.6 (1,378)	3.2 (430)	1.9 (828)
Provides financial incentives such as tax breaks for accommodation	1.5 (598)	3.6 (198)	1.7 (369)
Reduces liability for legal issues related to lack of diversity	1.5 (758)	3.7 (272)	1.8 (435)

Source: 2018 survey Q22, Q28.

Table B-12. Standard errors (SEs) for Table 3-7: Percentage of companies reporting concerns about hiring people with disabilities, by size and industry

Concern	All SE (N)	Company size			Industry		
		Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)
Knowing how to address the needs of workers with disabilities	1.6 (893)	2.6 (275)	2.3 (400)	4.6 (218)	3.1 (183)	1.9 (607)	4.1 (103)
Attitudes of coworkers	1.4 (471)	2.2 (141)	1.9 (200)	3.9 (130)	2.7 (81)	1.6 (323)	3.6 (67)
Attitudes of supervisors	1.2 (379)	1.8 (104)	1.7 (145)	4.0 (130)	2.6 (75)	1.3 (245)	3.2 (59)
Attitudes of top-level management	1.1 (269)	1.7 (89)	1.6 (114)	3.5 (66)	2.3 (51)	1.3 (171)	3.0 (47)
Attitudes of customers	1.5 (510)	2.4 (161)	1.9 (217)	5.0 (132)	2.6 (68)	1.7 (392)	3.3 (50)
Cost of accommodation	1.6 (865)	2.6 (272)	2.2 (351)	4.9 (242)	3.1 (185)	1.9 (586)	4.0 (94)
Cost of healthcare coverage	1.5 (468)	2.5 (189)	1.8 (188)	2.8 (91)	3.0 (106)	1.7 (318)	3.1 (44)
Cost of workers compensation premiums	1.5 (535)	2.5 (216)	1.9 (207)	3.3 (112)	3.0 (129)	1.8 (356)	3.4 (50)
Absenteeism	1.6 (940)	2.5 (317)	2.2 (409)	4.7 (214)	3.1 (195)	1.9 (654)	4.0 (91)
Turnover	1.6 (733)	2.6 (253)	2.2 (323)	4.8 (157)	3.1 (153)	1.9 (510)	3.8 (70)
Cannot discipline or fire a worker with a disability due to possible legal issues	1.6 (836)	2.6 (309)	2.2 (351)	4.6 (176)	3.1 (181)	1.9 (572)	3.9 (83)
Job safety for persons with disabilities and their coworkers	1.6 (1,164)	2.5 (352)	2.2 (499)	4.8 (313)	2.6 (268)	1.9 (763)	4.3 (133)
Productivity level	1.6 (698)	2.6 (257)	2.2 (310)	3.6 (131)	3.1 (164)	1.9 (463)	3.9 (71)
Ability of workers with disabilities to perform required job duties	1.6 (997)	2.5 (328)	2.2 (445)	4.7 (224)	3.0 (210)	1.9 (683)	4.3 (104)
Additional supervision	1.6 (556)	2.5 (214)	2.1 (246)	3.7 (96)	3.1 (126)	1.8 (383)	3.6 (47)

Source: 2018 survey Q27.

Table B-13. Standard errors (SEs) for Table 3-8: Percentage of companies reporting concerns about hiring people with disabilities, by whether companies actively recruit people with disabilities

Concern	All SE (N)	Actively recruits people with disabilities: Actively recruits SE (N)	Actively recruits people with disabilities: Does not actively recruit SE (N)
Knowing how to address the needs of workers with disabilities	1.6 (893)	3.7 (223)	1.9 (607)
Attitudes of coworkers	1.4 (471)	3.3 (140)	1.6 (296)
Attitudes of supervisors	1.2 (379)	3.1 (125)	1.3 (229)
Attitudes of top-level management	1.1 (269)	3 (77)	1.3 (172)
Attitudes of customers	1.5 (510)	3.6 (134)	1.7 (343)
Cost of accommodation	1.6 (865)	3.6 (227)	1.9 (581)
Cost of healthcare coverage	1.5 (468)	3.5 (109)	1.7 (332)
Cost of workers compensation premiums	1.5 (535)	3.5 (121)	1.8 (377)
Absenteeism	1.6 (940)	3.7 (230)	1.9 (644)
Turnover	1.6 (733)	3.7 (187)	1.9 (496)
Cannot discipline or fire a worker with a disability due to possible legal issues	1.6 (836)	3.7 (190)	1.9 (589)
Safety on the job for people with disabilities and their coworkers	1.6 (1,164)	3.6 (302)	1.9 (781)
Productivity level compared to non-disabled workers	1.6 (698)	3.6 (147)	1.9 (509)
Ability of workers with disabilities to perform required job duties	1.6 (997)	3.7 (212)	1.9 (718)
Need for additional supervision	1.6 (556)	3.4 (112)	1.9 (406)

Source: 2018 survey Q22, Q27.

Table B-14. Standard errors (SEs) for Table 3-12: Percentage of companies implementing recruitment and hiring practices and policies, by company size, industry, and federal contractor

		Company size			Industry			Federal contractor	
Policy or practice	All SE (N)	Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)	Yes	No
Job announcements that display a policy of non-discrimination and equal opportunity	1.5 (1,677)	2.5 (406)	1.6 (720)	0.6 (551)	2.8 (288)	1.7 (1,146)	2.0 (243)	3.4 (191)	1.6 (1,451)
Application process that is accessible	1.5 (754)	2.2 (154)	2.2 (285)	4.6 (315)	2.5 (96)	1.8 (532)	4.2 (126)	5.7 (98)	1.6 (636)
Interview accommodations	1.4 (1,743)	2.3 (474)	1.7 (722)	0.6 (547)	2.7 (288)	1.6 (1,213)	2.1 (242)	3.6 (184)	1.4 (1,527)
Interview locations that are accessible	1.0 (1,899)	1.7 (547)	1.1 (801)	2.7 (551)	2.1 (321)	1.1 (1,325)	0.1 (253)	0.9 (194)	1.0 (1,667)
Partnerships with organizations	1.2 (454)	1.7 (81)	1.7 (160)	4.8 (213)	2.3 (76)	1.4 (314)	3.0 (64)	5.1 (88)	1.2 (354)
Measureable goals for hiring people with disabilities	1.0 (256)	1.4 (52)	1.5 (84)	4.7 (120)	1.9 (55)	1.2 (170)	2.2 (31)	5.1 (70)	1.0 (177)
Dedicated recruiter	0.7 (121)	1.0 (20)	0.9 (40)	2.7 (61)	1.1 (23)	0.8 (75)	2.0 (23)	2.9 (31)	.70 (84)

Source: 2018 survey Q25.

Table B-15. Standard errors (SEs) for Table 3-13: Percentage of companies implementing retention and advancement practices and policies, by company size, industry, and federal contractor status

		Company size			Industry			Federal contractor	
Policy or practice	All SE (N)	Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)	Yes	No
Disability awareness or sensitivity training	1.6 (1,167)	2.5 (268)	2.2 (490)	4.4 (409)	3.1 (165)	1.9 (821)	4.1 (181)	5.9 (139)	1.7 (1,005)
A disability employee resource group or affinity group	0.7 (132)	1.1 (26)	0.8 (38)	4.0 (68)	1.3 (15)	0.8 (88)	2.0 (29)	2.2 (24)	0.7 (103)
Stay-at-work/return-to-work programs or policies	1.5 (1,636)	2.5 (407)	2.0 (703)	2.8 (526)	2.7 (291)	1.8 (1,126)	3.6 (219)	5.5 (176)	1.6 (1,430)
Workplace flexibility programs	1.5 (1,382)	2.4 (397)	2.0 (574)	3.7 (411)	3.1 (209)	1.7 (996)	4.2 (177)	4.0 (150)	1.6 (1,203)
Job reassignments	1.6 (1,357)	2.6 (297)	2.1 (583)	3.0 (477)	3.0 (240)	1.9 (932)	4.2 (185)	4.4 (164)	1.7 (1,167)
Voluntary and confidential self-disclosure	1.3 (1,750)	2.2 (478)	1.5 (733)	2.7 (539)	2.5 (305)	1.5 (1,218)	2.8 (227)	4.1 (185)	1.3 (1,530)
Measurable goals for retaining/advancing people with disabilities	1.5 (532)	2.3 (156)	2.1 (222)	5.0 (154)	2.7 (99)	1.8 (372)	3.5 (61)	5.4 (62)	1.6 (455)
Task shifting	1.6 (1,373)	2.6 (375)	2.0 (570)	3.1 (428)	3.1 (225)	1.8 (980)	4.2 (168)	4.9 (144)	1.7 (1,203)

Source: 2018 survey Q26.

Table B-16. Standard errors (SEs) for Figure 3-5: Percentage of companies that make special efforts to recruit veterans

Special efforts to recruit veterans	All SE (N)	Company size			Industry		
		Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)
Make special efforts to recruit veterans	1.0 (516)	1.3 (64)	1.7 (179)	4.6 (273)	2.4 (112)	1.2 (299)	4.0 (105)

Source: 2018 survey Q31.

Table B-17. Standard errors (SEs) for Figure 3-6: Percentage of companies that hired a veteran with disabilities in the past 12 months

Hired a veteran with disabilities in the past 12 months	All SE (N)	Company size			Industry		
		Small SE (N)	Medium SE (N)	Large SE (N)	Goods-producing SE (N)	Service-providing SE (N)	Public administration SE (N)
Hired a veterans with disabilities in the past 12 months	0.8 (204)	1.0 (26)	1.3 (68)	2.7 (110)	1.6 (35)	0.9 (130)	2.6 (39)

Source: 2018 survey Q29, Q30.

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Appendix C

Employer Survey Materials

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Appendix C
Employer Survey Materials

C.1 Employer Survey Advance Letter

OMB Control No: 1230-0012
Expiration Date: 06/30/2021

<BusinessName>
<Fname> <Lname> <Suffix>
<ADDR 1> <ADDR2>
<CITY>, <ST> <ZIP>

June 4, 2018

Dear <Fname> <Lname>:

The Office of Disability Employment Policy (ODEP), U.S. Department of Labor, provides policy analysis, technical assistance, development of innovative practices and strategies, and education and outreach to employers, employees and the disability community. ODEP is interested in learning how employers recruit and retain employees with disabilities. By gathering this information from senior executives, ODEP will be better able to develop policies that help employers meet their workforce needs.

Your company has been randomly selected to participate in the *Survey of Employer Perspectives on the Employment of People with Disabilities*. Westat, a private research firm in Rockville, Maryland, is conducting the interviews for the Department of Labor. Within the next few weeks, someone from Westat will call you to complete a short interview. The interview will last about 20 minutes. If an interviewer calls at an inconvenient time, he or she will be glad to call back at a mutually arranged time. Your cooperation is essential to the success of this effort.

Responses to this data collection will be used only for statistical purposes. Individually identifiable data will be accessible only to authorized project staff at Westat. The reports prepared for this study will summarize findings across the sample and will not associate responses with a specific firm or individual. The responses will not be linked with your company or with your name.

As required by the Paperwork Reduction Act of 1995, ODEP received approval from the Office of Management and Budget (OMB) to conduct this survey. The OMB approval number is 1230-0012 and the expiration date is June 30, 2021.

You may call Westat at 1-855-407-5685 if you have any questions about the study, or to set an appointment for an interview. The call center will be open from 9 AM until 8 PM (Eastern Time) Monday through Friday. We hope you will take the time to respond to the survey so we develop policies that are relevant, timely and useful to you. Your input is critical and, on behalf of ODEP, I would like to thank you for your assistance in this project.

Sincerely,

Savi Swick
Director of Research and Evaluation

C.2 Employer Survey

IF LARGE COMPANY, FIRST ASK:

SC1. Hello, may I please have the name of your company president? [IF NEEDED: I am calling from Westat, a survey research firm in Rockville, MD. We need to send some information about a survey we are conducting for the U.S. Department of Labor.]

Name _____ _____

SC2. And would we address a letter to him/her at [ADDRESS ON FILE}?

- ☐ Yes
- ☐ No (GO TO SC3)
- ☐ Don't know

SC3. May I please have the correct address?

_____ _____
Number Street

_____
Suite/Office number

_____ _____ _____
City State Zip code

Thank you very much.

Package will be mailed. When interviewer calls back, interview will start at SC4.

SC4. Hello. May I please speak with {NAME OF EXECUTIVE TO WHOM THE LETTER WAS MAILED}?

[My name is {INTERVIEWER'S NAME} and I am calling on behalf of the U.S. Department of Labor. {EXECUTIVE'S NAME} recently received a letter about a study of the employment of people with disabilities.]

- ☐ Available/coming to the phone (GO TO SC6)
- ☐ Not available
- ☐ At another telephone number
- ☐ No such person/no longer here/new respondent needed (GO TO SC5)
- ☐ Telephone company recording
- ☐ Answering machine/voice mail
- ☐ Retry dialing
- ☐ Go to result

Is this an agency or office of the federal government?

- ☐ Yes (IE)
- ☐ No

SC5. I'd like to speak with someone else who makes decisions on hiring at the overall company level such as the [Personnel or Human Resources Manager/President or Owner]. Would you please connect me to such a person?

IF SMALL BUSINESS USE PRESIDENT OR OWNER. OTHERWISE USE PERSONNEL OR HUMAN RESOURCES MANAGER

[Alternate titles:
President/owner
Vice-president, finance
Vice-president, human resources
Vice president
Director
Assistant director
Manager
Assistant manager
Supervisor]

- ☐ Speaking/coming to the phone (GO TO SC6)
- ☐ Collect name of best respondent
- ☐ Don't know best respondent; callback
- ☐ Go to result

SC6. Hello, my name is [INTERVIEWER NAME], and I am calling from Westat, a research firm in Rockville, MD. We are conducting a survey for the U.S. Department of Labor. We recently sent a letter introducing the study. This is a brief survey of business executives in high growth industries to see what opportunities might be available in these industries for people with disabilities.

The survey will take about 20 minutes.

This survey is for research purposes only and is not part of an investigation or audit by the Department of Labor. Your cooperation is voluntary. Your responses will not be linked with your company or with your name. First, I would like to ask about your business.

[IF NEEDED: You can skip any question you do not want to answer, and you can stop at anytime.]

Company Characteristics

1. I see that your business is mostly in [INDTYPE], is that correct?

- ☐ Yes (GO TO Q2)
- ☐ No
- ☐ Don't know
- ☐ Refused

1a. What type of business is it?

- ☐ Construction
- ☐ Manufacturing
- ☐ Wholesale Trade, Transportation, and Warehousing
- ☐ Retail Trade
- ☐
- ☐ Information
- ☐ Financial Activities
- ☐ Professional and Business Services
- ☐ Education
- ☐ Health Services
- ☐ Leisure and Hospitality
- ☐
- ☐ Public Administration
- ☐ Auto, Equipment, Machinery, and Personal and Household Goods Repairing
- ☐ Promoting or Administering Religious Activities
- ☐ Grantmaking
- ☐ Advocacy
- ☐ Business, Professional Associations, Labor Unions, and Political Organizations
- ☐ Dry Cleaning and Laundry Services
- ☐ Personal Care Services
- ☐ Death Care Services
- ☐ Pet Care Services
- ☐ Photofinishing Services
- ☐ Temporary Parking Services
- ☐ State and Local Government
- ☐ Other (SPECIFY): _____
- ☐ Don't know
- ☐ Refused

2. I also see that you have about <EMPLNUM> employees. Is that correct?

- ☐ Yes (GO TO Q4)
- ☐ No
- ☐ Don't know
- ☐ Refused

3. Including your corporate headquarters, subsidiaries, and all branches, how many employees does your business have? Would you say…

- ☐ Fewer than 5, (end survey) Code I5 – INELIGIBLE – FEWER THAN 5 EMPLOYEES
- ☐ 5 to 14,
- ☐ 15 to 249,
- ☐ 250 to 999
- ☐ Or 1000 or more?
- ☐ Don't know
- ☐ Refused

4. Does your company have multiple locations?

- ☐ Yes
- ☐ No (GO TO Q6)
- ☐ Don't know (GO TO Q6)
- ☐ Refused (GO TO Q6)

5. [IF Q4 = YES] How many employees do you have at your location?

____ Employees (RANGE = 1-99999)

- ☐ Don't know
- ☐ Refused

SOFT EDIT:
If Q2=01 and Q5>EMPLNUM or (NOT Q2=01 and ((Q3=02 and Q5>14) OR (Q3=03 and Q5>249) OR (Q3=04 and Q5>999)) show "PLEASE VERIFY NUMBER OF EMPLOYEES" and return to Q5.

6. I see that your business headquarters is in [HEADSTAT]. Is that correct?

- ☐ Yes (GO TO Q7)
- ☐ No
- ☐ Don't know
- ☐ Refused

a. In what state or US territory is your business headquartered?

- ☐ Alabama
- ☐ Alaska
- ☐ American Samoa
- ☐ Arkansas
- ☐ Arizona
- ☐ California
- ☐ Colorado
- ☐ Connecticut
- ☐ Delaware
- ☐ District of Columbia (Washington, DC)
- ☐ Florida
- ☐ Georgia
- ☐ Guam
- ☐ Hawaii
- ☐ Idaho
- ☐ Illinois
- ☐ Indiana
- ☐ Iowa
- ☐ Kansas
- ☐ Kentucky
- ☐ Louisiana
- ☐ Maine
- ☐ Maryland
- ☐ Massachusetts
- ☐ Michigan
- ☐ Minnesota
- ☐ Mississippi
- ☐ Missouri
- ☐ Montana
- ☐ Nebraska
- ☐ Nevada
- ☐ New Hampshire
- ☐ New Jersey
- ☐ New Mexico
- ☐ New York
- ☐ North Carolina
- ☐ North Dakota
- ☐ Northern Mariana Islands
- ☐ Ohio
- ☐ Oklahoma
- ☐ Oregon
- ☐ Pennsylvania
- ☐ Puerto Rico
- ☐ Rhode Island
- ☐ South Carolina
- ☐ South Dakota
- ☐ Tennessee
- ☐ Texas
- ☐ U.S. Virgin Islands
- ☐ Utah
- ☐ Vermont
- ☐ Virginia
- ☐ Washington
- ☐ West Virginia
- ☐ Wisconsin
- ☐ Wyoming

- ☐ Don't know
- ☐ Refused

7. [If Q4 = YES] And I see that your location is in [LOCSTAT]. Is that correct?

- ☐ Yes (GO TO Q8)
- ☐ No
- ☐ Don't know
- ☐ Refused

a. In what state or US territory are you located?

- ☐ Alabama
- ☐ Alaska
- ☐ American Samoa
- ☐ Arkansas
- ☐ Arizona
- ☐ California
- ☐ Colorado
- ☐ Connecticut
- ☐ Delaware
- ☐ District of Columbia (Washington, DC)
- ☐ Florida
- ☐ Georgia
- ☐ Guam
- ☐ Hawaii
- ☐ Idaho
- ☐ Illinois
- ☐ Indiana
- ☐ Iowa
- ☐ Kansas
- ☐ Kentucky
- ☐ Louisiana
- ☐ Maine
- ☐ Maryland
- ☐ Massachusetts
- ☐ Michigan
- ☐ Minnesota
- ☐ Mississippi
- ☐ Missouri
- ☐ Montana
- ☐ Nebraska
- ☐ Nevada
- ☐ New Hampshire
- ☐ New Jersey
- ☐ New Mexico
- ☐ New York
- ☐ North Carolina
- ☐ North Dakota
- ☐ Northern Mariana Islands
- ☐ Ohio
- ☐ Oklahoma
- ☐ Oregon
- ☐ Pennsylvania
- ☐ Puerto Rico
- ☐ Rhode Island
- ☐ South Carolina
- ☐ South Dakota
- ☐ Tennessee
- ☐ Texas
- ☐ U.S. Virgin Islands
- ☐ Utah
- ☐ Vermont
- ☐ Virginia
- ☐ Washington
- ☐ West Virginia
- ☐ Wisconsin
- ☐ Wyoming
- ☐ Don't know
- ☐ Refused

8. How many years has the company been in business?
_____ Years (RANGE = 0-999)

☐ Don't know
☐ Refused

9. Which of the following best describes your company's plans for your workforce over the next 12 months?

☐ We plan to increase the size of our workforce
☐ We have no plans to increase or decrease the size of our workforce
☐ We plan to reduce the size of our workforce
☐ Don't know
☐ Refused

10. Is your business a Federal contractor? (IF NEEDED: Federal contractors are employers who enter into a contract with the United States (any department or agency) to perform a specific job, supply labor and materials, or for sales of products or services.)

☐ Yes
☐ No
☐ Don't know
☐ Refused

11. About how many years have you been working for <SAMPESTB > in any position?

_____ Years (RANGE = 0-99)

☐ Don't know
☐ Refused

12. What is your job title?

☐ President/owner
☐ Vice-president, finance
☐ Vice-president, human resources
☐ Vice-president (SPECIFY): _____
☐ Director
☐ Assistant director
☐ Manager
☐ Assistant manager
☐ Supervisor
☐ Other (SPECIFY):_____
☐ Don't know
☐ Refused

13. About how many years have you been working in your current role/position?

_____ Years (RANGE = 0-99)

☐ Don't know
☐ Refused

14. Have you ever regularly interacted with someone with a disability inside the work environment, at either this company, or another company?

☐ Yes
☐ No
☐ Don't know
☐ Refused

15. Have you ever regularly interacted with someone with a disability outside the work environment, for example with friends, family, or neighbors?

☐ Yes
☐ No
☐ Don't know
☐ Refused

Disability Hiring, Retention, and Advancement

16. Under the Americans with Disabilities Act, an individual with a disability is defined as a person who (1) has a physical or mental impairment that substantially limits one or more major life activities; (2) has a record of such an impairment; or (3) is regarded as having such an impairment.

To your knowledge, do any of your company's current employees have a physical or mental disability? Would you say…

☐ Yes
☐ I'm not sure [GO TO Q18]
☐ No, not to my knowledge [GO TO Q18]
☐ Don't know [GO TO Q18]
☐ Refused [GO TO Q18]

17. [DO NOT ASK IF Q16 = NO, I'm not sure, Don't know, Refused] To the best of your knowledge, about what percentage of your workforce has a disability?

- ☐ 10% or more
- ☐ 5% to 9%
- ☐ 3% to 4%
- ☐ 1% or 2%
- ☐ Less than 1%
- ☐ 0%
- ☐ Don't know
- ☐ Refused

18. Does your company regularly track the number of people with disabilities that you employ?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

19. In the past 12 months, has your company hired any people with disabilities?

- ☐ Yes
- ☐ I'm not sure
- ☐ No, not to my knowledge
- ☐ Refused

20. [DO NOT ASK IF Q16 = NO, I'm not sure, Don't know, Refused] Have any of your employees with disabilities been with the company for 2 years or longer? Would you say…

- ☐ Yes,
- ☐ I'm not sure
- ☐ No, not to my knowledge
- ☐ Refused

21. Has your company promoted any employees with disabilities in the past 3 years? Would you say…

- ☐ Yes,
- ☐ I'm not sure,
- ☐ No, not to my knowledge,
- ☐ Or has your company not had any employees with disabilities in the past 3 years?
- ☐ Refused

22. Does your company actively recruit job applicants who are people with disabilities?

- ☐ Yes
- ☐ No (GO TO Q24)
- ☐ Don't know (GO TO Q24)
- ☐ Refused (GO TO Q24)

23. We want to know how your company is proactive in recruiting job applicants with disabilities. Does your company…

a. Create partnerships with disability-related advocacy organizations?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

b. Work with career centers at colleges and universities when vacancies arise?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

c. Post job announcements in disability-related publications or websites?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

d. Does your company post job announcements and/or host a table at disability-related job fairs?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

e. Establish summer internship and mentoring programs targeted at youth with disabilities?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

f. Contact the state Vocational Rehabilitation agency?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

g. Post jobs with the job service or workforce employment center (if needed: such as American Job Centers)?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

h. Are there any other ways your company is proactive in trying to recruit job applicants with disabilities?

_____

35. [IF NO, DON'T KNOW, OR REFUSED TO 33A-C] Can I have the name, email, and phone number of someone at your company who does work with hiring managers on those issues?
    NAME: _____
    E-MAIL ADDRESS: _____
    PHONE NUMBER: _____

36. [IF YES TO 33A OR TO 33B OR TO 33C] After reviewing the responses to this survey, we may want to follow-up with a small number of employers to learn more through a second telephone interview. This interview would probe on retention and advancement and ask about challenges and solutions, and experience with people with disabilities. May we contact you in the future?

    ☐ Yes
    ☐ No
    ☐ Don't know
    ☐ Refused

Those are all of the questions I have for you today. Thank you for participating. Goodbye!

Practices and Policies

25. We'd like to know more about your company's hiring and recruiting strategies. Does your company…

a. Post job announcements that display a policy of non-discrimination and equal opportunity?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

b. Have an application process that is accessible to people with visual disabilities? (IF NEEDED: This can include Section 508 compliant job applications, or Section 508 compliant job announcements/vacancy descriptions that include information about how to apply to the job.)

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

c. Provide an opportunity for all job interview candidates to request an accommodation for the interview?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

d. Have interview locations that are accessible to all people with disabilities?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

e. Develop partnerships with organizations to recruit people with disabilities?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

f. Have measureable goals for hiring people with disabilities?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

g. Have a dedicated recruiter or other person specialized in the hiring of people with disabilities?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

h. What other practices are in place for hiring and recruiting people with disabilities?

- ☐ **None**

_____

26. The next questions are about retaining employees with disabilities. The following strategies are thought to improve retention of people with disabilities. Does your company have or make available….

a. Training for all employees that includes disability awareness or sensitivity? (IF NEEDED: This could include broader non-discrimination or etiquette training, but only if disabilities are specifically addressed).

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

b. A disability-focused employee resource group or affinity group?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

c. Programs or policies to help employees who become ill, injured, or disabled stay at work or return to work?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

d. Workplace flexibility programs such as flexible scheduling or telecommuting?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

e. Job reassignments for existing employees who develop a disability?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

f. An opportunity for employees to voluntarily and confidentially self-disclose that they have a disability?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

g. Measurable goals for retaining and advancing employees with disabilities?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

h. Ways for employees to keep their existing position but reallocate specific tasks in the event that they cannot perform those tasks because of a disability? This is sometimes called task shifting.

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

i. What else, if anything, does your company do to retain people with disabilities?

- ☐ **None**

_____

Attitudes

27. Many employers have concerns about hiring people with disabilities, such as costs of accommodation or absenteeism. How much of a concern are the following factors to your company in hiring people with disabilities? I would like you to say whether it is not a concern, somewhat a concern, or a major concern.

a. Knowing how to address the needs of workers with disability. Is that not a concern, somewhat a concern, or a major concern to your company in hiring people with disabilities?

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

b. Attitudes of co-workers

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

c. Attitudes of supervisors

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

d. Attitudes of top-level management

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

e. Attitudes of customers

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

f. Cost of accommodation. Is that not a concern, somewhat a concern, or a major concern to your company in hiring people with disabilities?

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

g. Cost of health care coverage

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

h. Cost of workers compensation premiums

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

i. Absenteeism

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

j. Turnover

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

k. Cannot discipline or fire a worker with a disability due to possible legal issues. Is that not a concern, somewhat a concern, or a major concern to your company in hiring people with disabilities?

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

l. Safety on the job for persons with disabilities and their co-workers

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

m. Productivity level compared to non-disabled workers

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

n. Ability of workers with disabilities to perform required job duties

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

o. Additional supervision

- ☐ Not a concern
- ☐ Somewhat a concern
- ☐ Major concern
- ☐ Don't know
- ☐ Refused

p. Does your company have any other concerns about hiring people with disabilities?

- ☐ Yes _____
- ☐ No
- ☐ Don't know
- ☐ Refused

28. The next questions are about ways in which hiring people with disabilities might impact your company. Please just say yes or no to each. Would you say that hiring people with disabilities…

a. Increases morale at your company?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

b. Increases productivity at your company?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

c. Projects a positive image of your company with prospective employees?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

d. Projects a positive image of your company with customers?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

e. Increases the pool of qualified candidates?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

f. Benefits your company because of the financial incentives such as tax breaks for accommodation?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

g. Reduces liability for legal issues related to lack of diversity?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

h. Are there any other benefits to hiring people with disabilities?

- ☐ Yes _____
- ☐ No
- ☐ Don't know
- ☐ Refused

Veterans

These next few questions are specifically about recruiting and hiring Veterans.

29. In the past 12 months, has your company hired a Veteran?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

30. [IF Q29 = No go to Q31] In the past 12 months, has your company hired a Veteran who disclosed a disability, either before or after they were hired?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

31. Does your company make any special efforts to recruit Veterans?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

32. Would any of the following be helpful to your company to recruit and hire Veterans?
    a. Using a recruiting source to identify qualified Veteran candidates?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

    b. Programs to help Veterans translate military skills to the civilian workforce?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

    c. Programs to help Veterans transition from the military culture to the civilian workplace culture?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

    d. Information about how to address combat-related physical disabilities?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

e. Information about how to address mental illness, including post-traumatic stress disorder (PTSD)?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

f. Tax credits for hiring Veterans or disabled Veterans?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

33. I just have a couple more questions about involvement in dealing with issues with people with disabilities at your company. Do you yourself work with hiring managers to resolve issues on a case-by-case basis regarding any of the following?

a. Hiring people with disabilities?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

b. Disciplining or terminating employees with disabilities?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

c. Promoting or retaining employees with disabilities?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

34. If you could make one recommendation to improve the hiring of people with disabilities, what would it be?

- ☐ Don't know
- ☐ Refused

35. [IF NO, DON'T KNOW, OR REFUSED TO 33A-C] Can I have the name, email, and phone number of someone at your company who does work with hiring managers on those issues?
    NAME: _____
    E-MAIL ADDRESS: _____
    PHONE NUMBER: _____

36. [IF YES TO 33A OR TO 33B OR TO 33C] After reviewing the responses to this survey, we may want to follow-up with a small number of employers to learn more through a second telephone interview. This interview would probe on retention and advancement and ask about challenges and solutions, and experience with people with disabilities. May we contact you in the future?

    ☐ Yes
    ☐ No
    ☐ Don't know
    ☐ Refused

Those are all of the questions I have for you today. Thank you for participating. Goodbye!

Appendix D

In-Depth Interview Guide

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Appendix D
In-Depth Interview Guide

Survey of Employer Policies on the Employment of People with Disabilities
In-Depth Interview for Employers

Thank you for participating in this interview. My name is [NAME] and this is my colleague [NAME]. We work for Westat, a research organization based in Rockville, MD. The Department of Labor (DOL) contracted with Westat to research how employers put into practice their policies on disability employment. We are also interested in the challenges of employing people with disabilities.

Before we get started, there are a few things I should mention. This is a research project. Your participation in this interview is voluntary. There is no penalty if you decide not to participate. You may end the interview at any time. If you choose to participate, you can skip questions that make you uncomfortable. We have planned for this interview to last about 30 minutes.

Your responses in this interview are private. They will not be shared with others at your place of employment. We are speaking with HR Managers all across the country. We will submit a final report to DOL at the conclusion of the study that describes processes involved in disability employment. We may use quotes from you or other interviewees in our reports; however, interviewees' names, their places of employment, and other information that could be used to identify interviewees or their employers, will not be linked to responses.

Do you have any questions? [Answer all questions.]

Finally, with your permission, we would like to record this interview. The recording will be used to help us recall exactly what was said when we go to summarize our findings. The recordings and any notes we have will be stored securely on Westat's computer and will be protected, They will only be available to the Westat project team. We will destroy the recordings after the study is complete in 2019. Are you okay with us recording?

[IF PERMISSION IS GIVEN TO RECORD, ASK AGAIN IF THERE ARE ANY QUESTIONS. ANSWER ALL QUESTIONS. IF PERMISSION IS NOT GRANTED, RESCHEDULE FOR A TIME WHEN A SCRIBE IS AVAILABLE TO TAKE NOTES.]

If there are no further questions or concerns, I'd like to start the audio recording now.

[TURN ON THE RECORDER.] I need to ask you again: Are you willing to participate in the interview?

Are you willing to have the interview audio-recorded?

I. INTRODUCTION

I'd like to start by asking you to describe your background and your job title at [NAME OF EMPLOYER]. Please tell me how long you have worked here and what your responsibilities are.

[PROBE: Please describe your responsibilities as they relate to disability employment; Please describe trainings you have received relevant to disability employment; Please describe anything in your background relevant to disability employment.]

II. RECRUITMENT

A. Please describe the processes your firm follows to recruit people with disabilities. [PROBE]:

1. What recruitment strategies work?
2. How does your company identify qualified applicants with disabilities?
3. How do you determine if a candidate with a disability is capable of performing the job?
4. What challenges, if any, do you face recruiting people with disabilities?

B. Why has your company chosen to recruit people with disabilities?

III. SUPERVISION

A. Challenges

What are the experiences (including challenges) of supervising employees with disabilities? What kind of experiences, including challenges or concerns, have you heard from supervisors at your company about employees with disabilities?

B. Support

How does your firm support supervisors who manage employees with disabilities?

C. Performance Issues

1. What difficulties, if any, have supervisors at your company had handling performance issues with employees with a disability? [PROBE]: How did the supervisors address those situations?
2. How does your company decide if a problem with an employee is related to a disability or to another factor?

D. Retention

1. What is the process for addressing an employee who discloses—or develops—a disability during employment?
2. What processes at your company help ensure the retention of employees with disabilities?

E. Promotion

1. As compared to any other employee, how likely do you think an employee with a disability is to be considered for a promotion or receive advancement? [PROBE:] If not, what are the reasons why?
2. Are there challenges associated with promoting employees with disabilities at your company?

   [IF YES:] What are the challenges?

F. Termination

Has your company ever terminated an employee with a disability? [IF YES:] Were there particular challenges due to his or her disability status? Please explain.

IV. ACCOMMODATIONS

A. How do job applicants get accommodations? What is the process? [PROBE: Example?]

B. How does an existing employee of your firm get an accommodation for a disability? [PROBE: Please give me an example.]

C. What company processes are useful for ensuring accommodations for employees who need them?

D. What kinds of problems stand in the way of getting an accommodation for an employee? [PROBE: bureaucratic red tape, lack of knowledge about how to accommodate, etc.]

E. What are examples of other accommodations your firm has provided for employees?

V. CULTURE

A. How does your company address and overcome stereotypes and misconceptions about employees with disabilities?

B. How does your company communicate a culture of inclusiveness of employees with disabilities…

A. …internally?

B. …to the public?

VI. BENEFITS

A. What are the benefits to your company of employing individuals with disabilities?

B. To what extent has employing people with disabilities had any effect on…

A. …sales?

B. …revenue?

C. …customer service?

D. …customer satisfaction?

[PROBE:] what are the effects?

VII. COSTS

A. What do you believe are the costs—in time, money, and effort—associated with employing people with disabilities?

VIII. CLOSING

Is there anything you think might be important for me to know about disability employment at your company? [IF YES:] Please describe.

Thank you for your time!

Appendix E

Priority Mail Experiment

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Appendix E
Priority Mail Experiment

E.1 Overview

This appendix presents the results of a survey methods experiment to determine the efficacy of sending the invitation letter by Priority Mail versus First Class Mail. All companies were sent an invitation letter that was on ODEP letterhead and was signed by a senior ODEP official. For small and medium companies, the invitation letter was addressed to the "president/business owner." For large and very large businesses, interviewers first called companies to obtain the name and contact information of the most knowledgeable respondent before sending the invitation letter.

E.2 Methods

For this experiment, the treatment group received the invitation letter by Priority Mail and the control group received it by First Class Mail. Both First Class letters and Priority Mail letters were sent in a #10 full-face window envelope. The experiment was conducted in the first three randomly selected release groups, which consisted of 3,047 companies. Within each company size stratum, companies were randomly assigned to each experimental group. The experiment was conducted between June 2018 and August 2018. Table E-1 shows the number of companies assigned to each experimental condition.

Table E-1. First three random release groups by company size and experimental condition

Experimental Condition	Small	Medium	Large	Very large	Total
Priority Mail	474	381	347	322	1,524
First Class Mail	479	376	345	323	1,523

Source: Survey Management System

All invitation letters for small and medium companies were mailed at the same time early in the field period, following the allocation in Table E-1 above. Invitation letters for large and very large companies could not be mailed until an interviewer had obtained the name and contact information of the most knowledgeable respondent. Because of the time it took to obtain this contact information, only 306 of 669 large and very large companies in the treatment group had received the invitation letter by Priority Mail before the research team had to decide whether to continue using

Priority Mail for the rest of the sample releases. Results from the first several weeks of the field period did not provide support for continued use of Priority Mail. Therefore, the experiment was suspended, and future release groups received the invitation letter by First Class Mail.

The result is that while all of the treatment group in the small and medium strata received the invitation letter by Priority Mail, many cases in the treatment group in the large and very large strata ended up receiving the invitation letter by First Class Mail. Therefore, we present the results separately by company size and analyze the data for large/very large companies using an "intent-to-treat" approach versus a potentially biased "as treated" approach. Large and very large companies in the treatment group that received the letter by Priority Mail were those that we were able to contact sooner in the field period and that therefore may have been more amenable to participation.

The treatment and control groups were compared on three measures:

1. Yield rate, defined as the number of completed surveys divided by the total sample;
2. Refusal rate, defined as the number of final refusals divided by the total sample; and
3. Level of effort, which was measured by the mean number of call attempts for completed surveys.

E.3 Results

Table E-2 presents the results of the experiment. Results for the yield rate do not support the view that Priority Mail was effective. Among small and medium companies, the yield rate was 19.3 percent for the treatment group and 16.1 percent for the control group. The difference was not statistically significant. Among large and very large companies, the yield rates in the treatment and control groups were 13.9 percent and 11.4 percent, respectively.

There was no difference in the refusal rate between the treatment and control groups among small and medium companies. However, among large and very large companies, the refusal rate was significantly lower in the treatment group than in the control group (12.3% versus 16.9%). It is interesting that among large and very large companies, use of Priority Mail decreased refusals but had no impact on the yield rate. In other words, fewer refusals did not translate into more completed surveys. The use of Priority Mail for the invitation letter may simply have made company respondents less likely to explicitly refuse to participate in the survey.

We also examined the impact of sending the invitation letter by Priority Mail on the number of call attempts, a measure of level of effort. This analysis included only completed surveys. Even if Priority Mail had no effect on the response rate, if it reduced the number of call attempts needed to obtain a completed survey, then the reduced level of effort might outweigh the additional costs associated with Priority Mail. There was virtually no difference in the number of call attempts between the treatment and control groups. Among small and medium companies, the mean number of call attempts was 4.3 in the treatment group and 4.4 in the control group. Among large and very large companies, the mean was 5.7 in both the treatment and control groups.

Table E-2. Final dispositions by company size and experimental condition

Final disposition	Small/Medium		Large/Very large	
	Treatment (Priority mail)	Control (First class)	Treatment (Priority mail)	Control (First class)
1. Respondent – Completed Survey	165	138	93	76
C1: Complete Survey	165	138	93	76
2. Nonrespondent – In Scope – Eligibility Unknown	426	475	452	465
RB: Final Refusal	38	40	14	19
RD: Final Refusal – Do Not Call	31	34	8	14
RH: Hostile Refusal – Voxco	2	1	1	0
RM: Max Calls – Refusal	75	82	59	79
RN: Inbound Refusal	2	4	0	1
LM: Max Calls – Language	7	9	2	2
MC: Max Calls	143	170	151	128
NM: No Contact – Answering Machine in History	124	128	208	207
NP: Not available in Field Period	4	7	9	15
3. In Scope – Ineligible in Survey	76	79	10	11
I3: Federal Government Agency	10	9	9	8
I4: Ineligible Other	1	0	1	1
I5: Less Than 5 Employees	60	67	0	0
I6: All Hiring Done Outside of U.S.	0	1	0	1
I8: Company Does No Hiring	5	2	0	1
4. Nonrespondent – Unknown In Scope Status	122	110	89	86
NA: No Contact – RNA only	1	2	0	0
NL: Not Locatable	119	108	89	86
NW: Non-working Phone Number	2	0	0	0
5. Out of Scope	66	53	25	30
OB: Out of Business	66	52	25	29
OD: Duplicate	0	1	0	1
Yield rate	19.3	16.1	13.9	11.4
Refusal rate[a]	17.3	18.8	12.3	16.9
Level of effort (mean call attempts)	4.3	4.4	5.7	5.7

Source: Survey Management System

[a] Chi-square test for difference between Priority Mail and First Class group for large and very large companies is significant at $p < 0.05$.

E.4 Conclusions

The experiment provided limited support for the use of Priority Mail versus First Class Mail for the invitation letter. The results were very similar to an analysis conducted in the first few weeks of the field period. Therefore, the research team decided to suspend the Priority Mail experiment, given the additional cost, and future release groups received the invitation letter by First Class Mail.

Appendix F

Comparison of Federal Contractor Status in Survey and Government Data

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Appendix F
Comparison of Federal Contractor Status in Survey and Government Data

Section 503 of the Rehabilitation Act requires federal contractors to take affirmative action to recruit and hire people with disabilities and collect data on the number of people with disabilities who applied and were hired. The employer survey ask companies whether they were federal contractors so that disability inclusive practices could be compared between federal contractors and non-contractors. ODEP asked Westat whether it would be possible to compare federal contractor status reported in the survey to government data. This appendix presents the results of that comparison.

F.1 Methods

The employer survey asked: "Is your business a contractor of the federal government?" Responses to this question were compared to government data from USASpending.gov.

USAspending.gov, available at http://www.USAspending.gov, is a government source for data on federal awards including contracts, grants, loans, and other forms of financial assistance. USASpending.gov data includes awards and other contract actions in each fiscal year with start dates and end dates. The employer survey was conducted in fiscal year 2018. Determining whether a company had a federal contract at the time the survey would have required significant manipulation of the USAspending.gov data that was beyond the scope of this analysis. Specifically, for each company, a longitudinal record would have to be created from dates of contract actions to determine whether the company had a contract on the survey date or in the recent past. Instead, since most federal contracts do not exceed five years, we included data from the past five fiscal years in the analysis (fiscal years 2014 to 2018). Companies were counted as federal contractors using USASpending.gov data if they had an award in the past five fiscal years. Data from USAspending.gov was linked to the employer survey using companies' D-U-N-S numbers.

It is important to emphasize that USAspending.gov data is not a "gold standard" for determining federal contractor status. First, as noted above, the measure derived from USAspending.gov does not capture whether the company had an active contract at the time of the survey but rather at some

time in the past five years.[7] Second, USAspending.gov data contain information only on prime awards. Companies that are federal subcontractors but not prime contractors may have correctly reported that they were federal contractors. Finally, the Government Accountability Office conducted an analysis of USAspending.gov data which found that only between 2 and 7 percent of awards had data that matched federal agency records on all 21 data elements examined and that the website was missing data on $619 billion of assistance awards (grants and loans).[8] For these reasons, this analysis is limited in its ability to evaluate whether self-reports of federal contractor status are accurate as judged against a gold standard.[9] The analysis consisted of cross-tabulation between the two data sources.

F.2 Results

Table F-1 shows the agreement between self-reported federal contractor status and the presence of a federal award in the past five years in USAspending.gov data. There is considerable disagreement between the two data sources. For example, of companies that identified as federal contractors on the survey, only 35 percent (column percentage) had a federal award in the past five years in government data. Of companies that had a federal award in the USAspending.gov data, only 39 percent (row percentage) identified as a federal contractor on the survey.

Table F-1. Agreement between employer survey and government data on federal contractor status

USAspending.gov	Employer survey			Total
	Yes	No	Don't know	
Yes	N=71 Row=39.4 Column=35.2	N=102 Row=56.7 Column=5.7	N=7 Row=3.9 Column=18.4	N=180 (8.9%)
No	N=131 Row=7.1 Column=64.9	N=1680 Row=91.2 Column=94.3	N=32 Row=1.7 Column=81.6	N=1,843 (91.1%)
Total	N=202 (9.9%)	N=1,782 (88.1%)	N=39 (1.9%)	2,023

Source: 2018 survey Q10 and USAspending.gov data

[7] A sensitivity analysis that included only fiscal year 2018 USAspending.gov data produced similar results to the analysis that used the past five years.

[8] https://www.gao.gov/products/GAO-14-476

[9] Data from the Office of Federal Contract Compliance Programs would like be the gold standard for determining federal contractor status.

F.3 Conclusion

From this analysis we cannot conclude that either survey or USAspending.gov data on federal contractor status is superior to the other. Moreover, due to limitations of USASpending.gov data, the analysis in the final report relied on survey reports of federal contractor status. More importantly, federal contractor status from survey data is most relevant for assessing the possible impact of Section 503 on recruitment and hiring of people with disabilities. Companies identified as federal contractors by a senior executive knowledgeable of disability employment practices and policies—independent of whether government data indicates an award—would be expected to be implementing practices to recruit and hire people with disabilities to meet Section 503 requirements.

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Appendix G

Exploratory Factor Analysis Detailed Tables

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Appendix G
Exploratory Factor Analysis Detailed Tables

Table G-1. Factor analysis loadings for positive attitudes

Positive attitude	Factor 1	Factor 2
Factor 1: Competitive advantage		
Increases morale	0.509	0.357
Projects a positive image with prospective employees	0.843	0.166
Projects a positive image with customers	0.760	0.183
Increases the pool of qualified candidates	0.452	0.296
Factor 2: Profitability		
Reduces liability for legal issues related to lack of diversity	0.223	0.750
Provides financial incentives such as tax breaks for accommodation	0.156	0.655
Increases productivity	0.357	0.392
	Factor 1	**Factor 2**
Percentage of variance explained	80.8	19.2
Eigenvalue	2.756	.649
Cronbach's alpha	.778	.653

Source: 2018 survey, Q28

Table G-2. Factor analysis loadings for negative attitudes

Negative attitude	Factor 1	Factor 2	Factor 3
Factor 1: Work performance			
Ability of workers with disabilities to perform required job duties	0.756	0.127	0.138
Productivity level	0.718	0.134	0.239
Additional supervision	0.607	0.176	0.285
Job safety for persons with disabilities and their coworkers	0.547	0.237	0.193
Turnover	0.493	0.279	0.367
Absenteeism	0.483	0.234	0.398
Cannot discipline or fire a worker with a disability due to possible legal issues	0.452	0.176	0.394
Factor 2: Social issues			
Attitudes of supervisors	0.154	0.909	0.098
Attitudes of top-level management	0.173	0.855	0.088
Attitudes of coworkers	0.190	0.818	0.161
Attitudes of customers	0.210	0.584	0.135
Factor 3: Cost			
Cost of healthcare coverage	0.211	0.073	0.728
Cost of workers compensation premiums	0.296	0.157	0.718
Cost of accommodation	0.393	0.113	0.436
	Factor 1	**Factor 2**	**Factor 3**
Percentage of variance explained	71.4	21.1	7.5
Eigenvalue	5.712	1.685	.602
Cronbach's alpha	.848	.894	.740

Source: 2018 survey, Q27

Appendix H

Point Estimates and Confidence Intervals for Changes between 2008 and 2018

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Appendix H
Point Estimates and Confidence Intervals for Changes between 2008 and 2018

Table H-1. Point estimates and confidence intervals for changes between 2008 and 2018: Percentage of companies that employed people with disabilities, by size and industry

	Company size			Industry		
Employed people with disabilities	Small % (95% CI)	Medium % (95% CI)	Large % (95% CI)	Goods-producing % (95% CI)	Service-providing % (95% CI)	Public administration % (95% CI)
Employed people with disabilities	1.1 (-2.8-5.0)	6.2 (1.2-11.3)	17.3 (5.3-29.3)	2.1 (-4.0-8.2)	4.9 (1.3-8.6)	-5.4 (-17.4-6.6)

Table H-2. Point estimates and confidence intervals for changes between 2008 and 2018: Percentage of companies that actively recruit people with disabilities, by size and industry

	Company size			Industry		
Actively recruit people with disabilities	Small % (95% CI)	Medium % (95% CI)	Large % (95% CI)	Goods-producing % (95% CI)	Service-providing % (95% CI)	Public administration % (95% CI)
Actively recruit people with disabilities	1.4 (-2.5-5.2)	5.6 (1.2-10.0)	15.4 (3.9-26.9)	5.8 (1.2-10.5)	3.8 (0.5-7.2)	-2.4 (-14.4-9.5)

Table H-3. Point estimates and confidence intervals for changes between 2008 and 2018: Percentage of companies that hired people with disabilities in the past 12 months, by size and industry

	Company size			Industry		
Hired people with disabilities in the past 12 months	Small % (95% CI)	Medium % (95% CI)	Large % (95% CI)	Goods-producing % (95% CI)	Service-providing % (95% CI)	Public administration % (95% CI)
Hired people with disabilities in the past 12 months	0.1 (-2.9-3.2)	9.1 (5.0-13.3)	14.9 (2.3-27.6)	2.9 (-1.4-7.2)	5.5 (2.5-8.5)	0.5 (-10.6-11.7)