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One Size Does Not Fit All: A New Look at the Labor Force Participation of People With Disabilities

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Introduction

The U.S. labor force participation rate¹ has shrunk rapidly and persistently over the past few decades. In the past dozen years, the labor force participation rate for adults of working age (21–65) fell by 3.3%, to 75%²—meaning that fewer adults are working or actively looking for jobs. Nearly one third of those who haven’t sought work or who stopped trying to find it are people with disabilities. And although overall U.S. unemployment rates are nearly back to normal after the Great Recession that began in 2007, millions of working-age adults with disabilities are willing to work but do not have jobs and do not count as unemployed. This situation leaves the United States with an even smaller pool of workers to support the recovering economy.

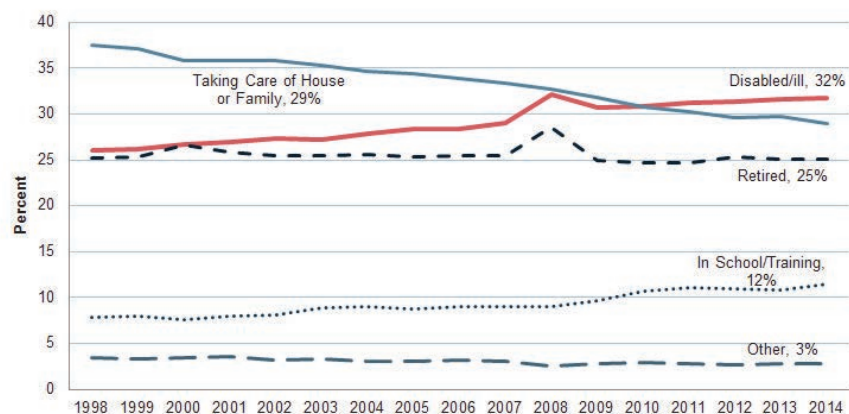
According to the Current Population Survey administered by the Bureau of Labor Statistics and the Census Bureau, adults are out of the workforce for a variety of reasons. Besides disability, these reasons include retirement, the need to take care of house or family, school demands, and others. People who drop

out of the workforce—sometimes called *discouraged workers*—may fall into any of these categories, as presented in Figure 1. Here, we find that more than 25% of those not in the workforce are retirees. However, the overall rate of change for this group has been relatively stable over the past decade, so early retirement is probably not the main

reason for the decline in labor force participation for working-age adults. In fact, the recession may have kept older Americans working because they could not afford to retire (Campbell, 2015). Similarly, fewer people chose to stay out of the labor force to take care of house or family—by 2014, the numbers had dropped to nearly 29% from a high of 34% in 1998.

Disability remains a primary reason Americans are not in the workforce—32% of people not looking for a job reported that they are disabled; this figure continues to rise. The number of working-age individuals with disabilities who *are* in the labor force has also dropped, from 25% in 2001 to 16% in 2014, a more than 8.5% decline (see Figure 2). Initially, more people left the workforce in 2007 as the Great Recession kicked in, but those numbers have not reversed for people with disabilities at the same rate as for people without disabilities, despite the recovering

Figure 1. Reasons for Not Being in the Labor Market

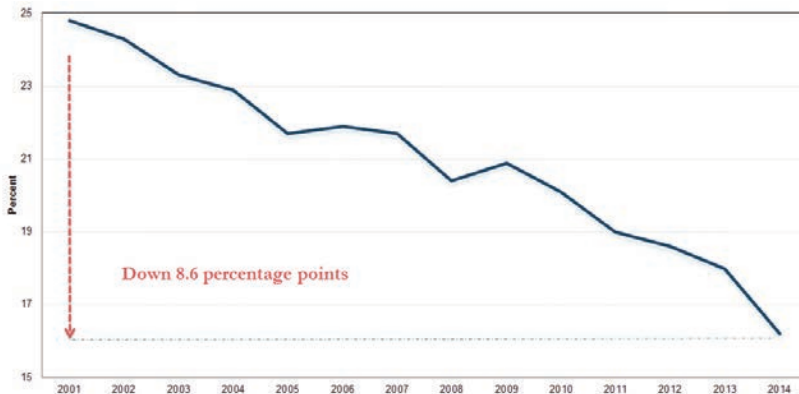


¹ The labor force participation rate is the number of people who are either employed or actively looking for work as a share of the population that could be working, excluding those in the armed forces, prison inmates, and residents of nursing homes.

² Based on authors’ calculation using Current Population Survey (<http://www.census.gov/cps/>) from years 2001–2013.

economy. Approximately 55 million new jobs are expected to be created by 2020 as the population ages and retirees leave the job market (Carnevale, Smith, & Strohl, 2013). Yet people with disabilities will be unable to bridge this gap if they are not in the labor force and continue to exit the labor force at the current rate.

Figure 2. Labor Force Participation Rate for People With Disabilities Ages 21–65



Background

Since at least the mid-1970s, policy makers have shifted their attention from income support for people with disabilities to policies designed to promote labor participation and employment. Explicit work incentives and improved rehabilitation service delivery have been linchpins of this reorientation. A series of policy reforms has been implemented to promote labor force participation of people with disabilities. Key examples include the following:

- In 1998, the Workforce Investment Act required that workforce services, such as those provided by the One-Stop/American Job Center systems, be physically and programmatically accessible to those with disabilities and that vocational rehabilitation services be integrated into the workforce investment system.
- The Ticket to Work and Work Incentives Improvement Act of 1999 authorized the creation of employment networks to provide work entry/reentry guidance and support to beneficiaries of Social Security Disability. This guidance is typically provided by trained work incentive staff who help beneficiaries obtain and maintain employment.
- The Americans with Disabilities Act Amendments Act of 2008, Section 3, expanded the definition of disability to provide workplace protections to individuals who experience “substantial limits” in one or more life domains, possess a record of such impairment, or are regarded as having an impairment in one or more life domains. The expanded definition provided additional protections to employees with episodic disabilities or conditions that are in remission or managed medically. While the Americans with Disabilities Act is primarily a protective legislation, it ensures access to work settings for people with a range of disabilities.
- The Workforce Innovation and Opportunity Act of 2014 shifted the focus of workforce investment services, among other changes, to emphasize people with disabilities. It requires states to collaborate across agencies and implement policies to improve employment outcomes for people with disabilities and increases funding for youth with disabilities transitioning to postsecondary education and employment.

- Employment First is a federal initiative wherein states align their policies and practices to support integrated employment for people with disabilities. As of 2014, 32 states have formal legislation or executive orders made by governors instructing their administrations to change the employment systems that support people with disabilities (Nord & Hoff, 2014). About 45 states have implemented some form of Employment First activities.
- Executive Order 13548–Increasing Federal Employment of Individuals with Disabilities aims to increase the hiring of people with disabilities in the federal government. This includes the recruitment, hiring, retention, and return to work of people with disabilities across all federal agencies. Although increases remain small, in 2013 the percentage of people with disabilities employed by the federal government rose to 12.8%, the highest rate in 33 years (U.S. Office of Personnel Management, 2014).
- The Office of Federal Contract Compliance Programs changed the regulations for Section 503 of the Rehabilitation Act of 1973, as amended, and a major change included the request for federal contractors to set a 7% utilization goal to increase the hiring and retention of people with disabilities.

Despite the array of federal policies, executive orders, and incentive programs intended to increase employment and employability of people with disabilities, labor market outcomes have not improved for this population in more than 40 years. The growing number of discouraged workers with disabilities may be a result of policies that unintentionally make it easier to leave the workforce or stay out altogether (Winship, 2013). In addition, current policy typically addresses people with disabilities as one homogenous group. However, people with disabilities require different types and levels of accommodations and the cost of providing vocational rehabilitation and employment-specific services varies by disability type as well (Denny-Brown, O'Day, & McLeod, 2015; Institute for Community Inclusion, 2005).

Does this one-size-fits-all policy approach mask important distinctions regarding the labor participation of people with different types of disabilities? To find out, we examined labor market outcomes for this population by disability type at both the national and state levels. Our analysis revealed that the labor participation choices and employment experiences of people with disabilities vary substantially by disability type. These patterns remain similar even after controlling for individual characteristics, suggesting a need to account for this diversity if policy makers aim to improve the labor market outcomes for this population.

Data and Method

To carry out this analysis, we used data from the 2008–2013 American Community Survey (ACS), a national survey conducted annually by the U.S. Census Bureau to provide demographic, economic, and housing data on a nationally representative sample of U.S. residents. In 2008, the ACS changed the way it asks about disability. Brault (2009) pointed out that the 2008 survey questions should not be used to make comparisons to earlier ACS disability estimates. Therefore, our analysis focused on labor market outcomes of people with disabilities for the past 6 years. We pooled the data from the Integrated Public Use Microdata Series to allow for state panel analysis and comparison, and we limited our sample to individuals aged 21 to 64 years to focus on the working-age population.

Using ACS disability definitions, we concentrated on four types of disabilities categorized by an individual's functional and activity limitations:

- Cognitive difficulty—individuals with cognitive difficulties (such as learning, remembering, concentrating, or making decisions) because of a physical, mental, or emotional condition.
- Ambulatory difficulty—individuals with a condition that substantially limits one or more basic physical activities, such as walking, climbing stairs, reaching, lifting, or carrying.
- Vision or hearing difficulty—individuals with a long-lasting condition of blindness, deafness, or a severe vision or hearing impairment.
- Self-care difficulty—individuals with any physical or mental health condition that has lasted at least 6 months and makes it difficult for them to take care of their own personal needs, such as bathing, dressing, or getting around inside the home. This excludes such temporary health conditions as broken bones or pregnancies.

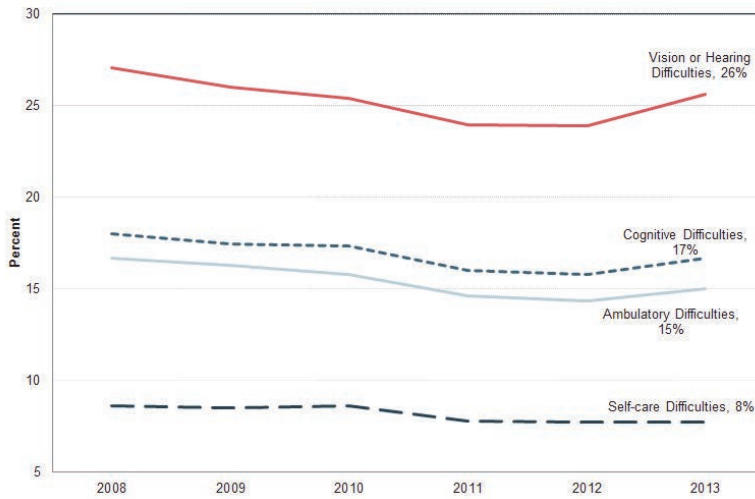
We first calculated labor participation and employment rates separately for each disability type at the national level. We then calculated these rates for each state to compare variations by disability type and state. Finally, studies have shown that labor market outcomes of people with disabilities vary substantially by individual characteristics—characteristics apart from their disabilities (Berry & Caplan, 2010; Ehrenberg & Smith, 2011; Hasnain & Balcazar, 2009). To test if the observed difference in labor market choices by disability type remains after controlling for key individual characteristics,³ we tested two regression models using labor force participation and employment status as outcome variables.

The National View

Data from ACS showed that the labor force participation rate for working-age adults varies significantly by disability type. Twenty-six percent of people with vision or hearing difficulties were in the labor force, compared with only 17% of people with cognitive difficulties, 15% of people with ambulatory difficulties, and 8% of people with self-care difficulties. Notably, labor force participation among people with all types of difficulties declined in this same time period. People with ambulatory difficulties have seen the most severe decline in labor force participation among these disability types, dropping by nearly 2% within a 5-year span. For people with vision or hearing difficulties, the labor force participation rate has dropped nearly 1.5%, whereas labor force participation rate for people with self-care difficulties has remained consistent at the 8% mark (see Figure 3).

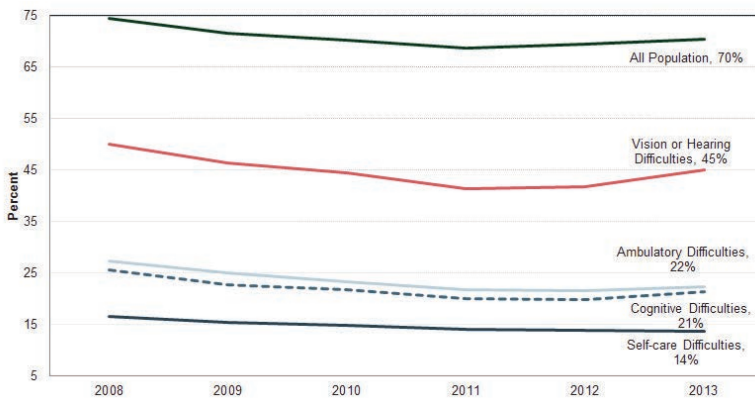
³ Individual characteristics include the following: gender, age (age square), race, marital status, educational attainment, and migration status. All estimates are calculated using Stata 13 (<http://www.stata.com/stata13/>) and sample weights provided by the U.S. Census Bureau.

Figure 3. Labor Force Participation Rate for People With Disabilities by Disability Type



As reflected in Figure 4, the employment rate for working-age people without disabilities was about 70% in 2013. Although the employment rate for working-age people with disabilities as a whole was 25% in the same year, that number also varied with the type of disability, from a high of 45% for people with vision or hearing difficulties to a low of 14% for people with self-care difficulties. People with ambulatory and cognitive difficulties had employment rates of 22% and 21%, respectively.

Figure 4. Employment Rate for People With Disabilities by Disability Type



Results from regression analysis are similar to those of the descriptive analysis (see regression results in Appendix B). People with vision or hearing difficulties are more likely to be active in the labor market and to be employed compared with those with ambulatory difficulties. On the other hand, people with cognitive and self-care

difficulties are less likely to participate in the labor force compared with those with ambulatory difficulties.

For people with disabilities who have stayed on the job, the type of employment that they are likely to find tends to be low-income jobs with poor or no benefits and few opportunities for career progression (see Table 1). Getting stalled like this may reflect lower educational attainment—only 9.8% of people with disabilities have a bachelor’s degree or higher, compared with 21% of people without disabilities (Yin, Shaewitz, & Megra, 2014; U.S. Bureau of Labor Statistics, 2014). Federal policies and incentives do not offset what is also a matter of simple economics—jobs for people with a disability who are less educated will not provide long-term career advancement, adequate benefits, or a living wage. As a result, this subpopulation is less motivated to rejoin the labor force once they get on the Social Security Disability benefit rolls simply because the costs of job searches, health care, and living may well exceed the expected wage and benefits from employment.

Table 1. Top 10 Occupations for People With Disabilities in 2003 and 2013

Ranking	2003	2013
1	Janitors and building cleaners	Janitors and building cleaners
2	Cashiers	Cashiers
3	Laborers and freight, stock, and material movers, hand	Laborers and freight, stock, and material movers, hand
4	Driver/sales workers and truck drivers	Driver/sales workers and truck drivers
5	Cooks	Cooks
6	Retail salespersons	Retail salespersons
7	Nursing, psychiatric, and home health aides	Nursing, psychiatric, and home health aides
8	Maids and housekeeping cleaners	Stock clerks and order fillers
9	Secretaries and administrative assistants	Other production workers, including semiconductor processors and cooling and freezing equipment operators
10	Stock clerks and order fillers	Secretaries and administrative assistants

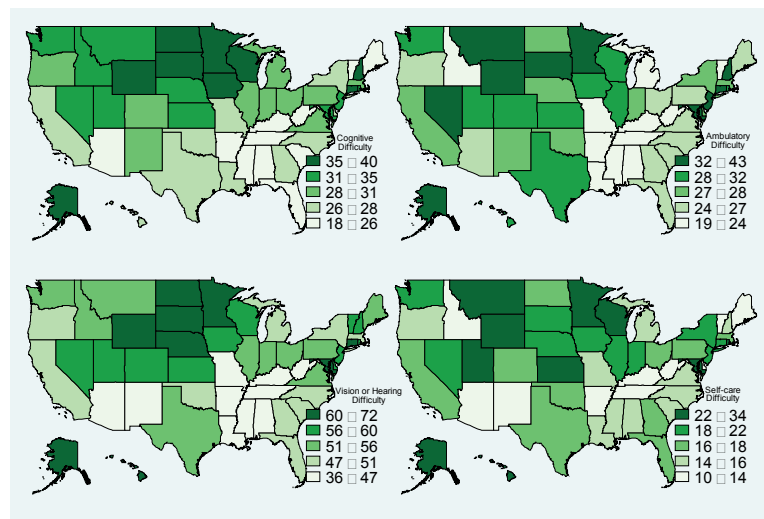
Note: Occupation categories are similar by disability type, although rankings of the occupation change slightly by type.

The State View

The national data provide an overarching picture of employment for people with disabilities, but states typically implement most policy. So, we further broke down the labor force participation rate by disability type and state. Using 2013 ACS data, we plotted labor force participation rates for working-age adults with disabilities and found noteworthy variations (see Figure 5). In general, Midwest states tend to have higher labor force participation rates and southeastern states tend to have lower rates.

Tables 2 and 3 present the top 10 and bottom 10 states with highest and lowest labor force participation rates by disability type, respectively. For most states, the labor force participation rate varies by disability type, and those differences are considerable in a few. Alaska, Minnesota, and Wyoming have high labor force participation rates across all disability types, whereas West Virginia, Arkansas, Kentucky, and Tennessee have low labor force participation rates across all disability

Figure 5. Labor Force Participation Rate by State and Disability Type in 2013



types.⁴ The District of Columbia—despite a high labor force participation rate for people with cognitive difficulties—ranked at the bottom for people with vision or hearing and self-care difficulties. On the other hand, Montana has a relatively low overall labor force participation rate, but ranked in the top ten for labor force participation rate for people with ambulatory difficulties.

Table 2. Labor Force Participation Rate by Disability Type by State in 2013, Top 10 States

Ranking (top 10)	Cognitive difficulties		Ambulatory difficulties		Vision or hearing difficulties		Self-care difficulties	
1	Connecticut	40%	Wyoming	43%	Wyoming	72%	Alaska	34%
2	Minnesota	40%	Alaska	42%	Nebraska	66%	Wyoming	33%
3	Alaska	38%	Maryland	36%	South Dakota	65%	Montana	32%
4	Wyoming	38%	Minnesota	35%	Connecticut	64%	Minnesota	26%
5	North Dakota	38%	Connecticut	34%	Minnesota	64%	Rhode Island	25%
6	Wisconsin	37%	Nevada	33%	North Dakota	62%	Kansas	25%
7	New Hampshire	36%	South Dakota	32%	Hawaii	61%	Maryland	24%
8	South Dakota	36%	New Hampshire	32%	Alaska	61%	Utah	23%
9	Iowa	36%	Montana	32%	Maryland	60%	Wisconsin	22%
10	District of Columbia	36%	New Jersey	32%	Iowa	60%	Hawaii	22%

Table 3. Labor Force Participation Rate by Disability Type by State in 2013, Bottom 10 States

Ranking (bottom 10)	Cognitive difficulties		Ambulatory difficulties		Vision or hearing difficulties		Self-care difficulties	
1	West Virginia	18%	Arkansas	19%	West Virginia	36%	Vermont	10%
2	Arkansas	21%	West Virginia	20%	Kentucky	41%	District of Columbia	11%
3	Mississippi	22%	Kentucky	21%	Mississippi	41%	Arkansas	11%
4	Kentucky	23%	Mississippi	21%	Alabama	43%	Idaho	12%
5	Tennessee	23%	Alabama	22%	Arkansas	43%	West Virginia	12%
6	Alabama	24%	Louisiana	23%	New Mexico	44%	Maine	12%
7	South Carolina	25%	Idaho	23%	Tennessee	45%	Tennessee	13%
8	Arizona	25%	Michigan	24%	Arizona	46%	Delaware	13%
9	Maine	25%	Tennessee	24%	District of Columbia	46%	Kentucky	13%
10	Florida	25%	Missouri	24%	Louisiana	47%	New Mexico	14%

⁴A complete list of labor force participation rate and employment rate by state and disability type can be found in Appendix A.

An additional marker of employment health is employment rates. The state employment rate tends to fluctuate in response to the economy, and it provides a more short-term measure of job attainment for people with and without disabilities. As expected, the employment rate patterns for states by disability type are similar to the percentages of people with disabilities in the labor force in each state. States with higher employment rates of people with disabilities also tend to have higher percentages of people with disabilities in the labor force. For example, nearly 68% of working-age adults in Wyoming with vision or hearing difficulties are employed, and more than 71% of this subgroup is active in the state's labor force (see Figure 6). The converse is also true. West Virginia has a low employment rate for residents with disabilities across all types and some of the lowest labor force participation rates.

There are exceptions here as well. For instance, in Missouri, more than half of working-age adults with vision or hearing difficulties are employed, whereas the labor force participation rates for this subgroup is relatively low at nearly 47%.

For some states, the challenge of engaging people with disabilities in the labor force may simply be a matter of numbers. States with higher numbers or a more concentrated population of people with disabilities might not have the resources to support job seekers. On the other hand, states with a low concentration of people with disabilities might incorporate this group into the economy more easily (see Figure 7). For instance, Hawaii has fewer people with disabilities to serve, and it ranked 7th highest among states for labor force participation rates of people with vision/hearing difficulties and 10th highest among states for people with self-care difficulties. In addition, states with greater economic challenges may not have the jobs available—southern states have lower labor force participation rates and employment rates overall compared with Midwestern states. This is borne out in reports on the economic ranking of states, in which states like Mississippi, Arkansas, Kentucky, and West Virginia consistently rank in the bottom 10 across a variety of

Figure 6. Employment Rate by State and Disability Type in 2013

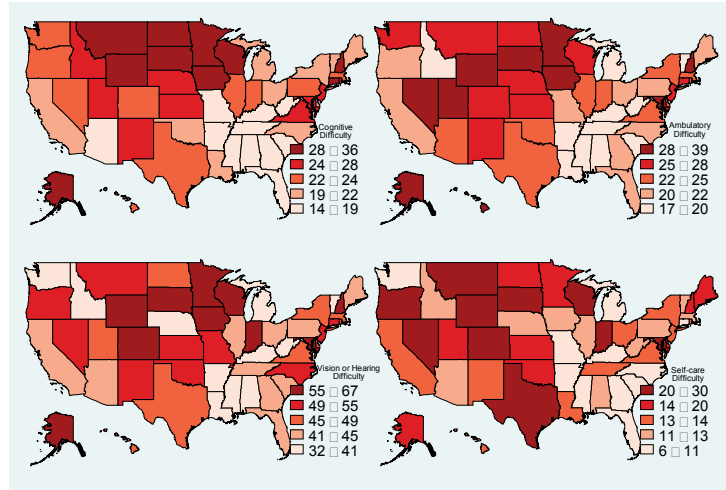
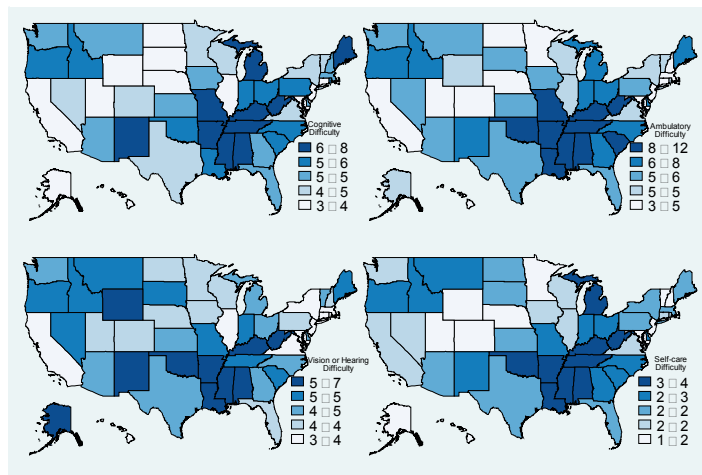


Figure 7. Disability Rate by State and Type in 2013



measures (Holland, 2011; Holodny & Kiersz, 2014). Whatever the challenges, states with higher populations of people with disabilities overlap with those states that also have low labor force participation rates and low employment rates (see Figure 5).

State Policy and Implementation

In response to challenges states face in empowering people with disabilities to join the workforce and in helping them find competitive employment, many states have introduced Employment First, a federal initiative to implement policies and programs designed to improve systems and increase employment opportunities for people with disabilities. As shown in Table 4, more than 30 states implemented formal legislation, policies, or executive orders to encourage labor force participation of people with disabilities, and more than 45 states engaged in activities to improve the employment systems for people with disabilities.

In Wyoming, for example, the legislature passed a bill to increase hiring of individuals with developmental disabilities; it is an Employment First state that supports integrated employment for people with disabilities. Montana’s employment preference policy encourages the hiring of people with disabilities in addition to veterans with and without disabilities. Many states also offer employer tax credits to employers filling a position with a person with a disability, tax credits to small businesses to cover the costs of accommodations, and credits for removing barriers that would prevent hiring a person with a disability.

Alaska and Maine—with fast-track provisions to move adults into state/local public employment—have higher labor force participation rates and higher employment rates. These states have become model employers through executive orders and/or legislation, and as a result, they have shown higher labor force participation and employment rates for people with disabilities. Although it is impossible to assess the effectiveness of state policy, executive orders, or legislation on labor force participation rate and employment rate for people with disabilities without conducting a formal evaluation study, states that implement these policy initiatives may be changing the climate and perceptions of employers toward people with disabilities and ultimately providing greater long-term employment opportunities for this population.

Table 4. Employment First Activities Implemented by Type and State

Activity	State
No known activity or policy	Nebraska, South Carolina, West Virginia, Vermont
Directive policy	North Dakota, Minnesota, Michigan, Colorado, Oklahoma, Missouri, Tennessee, Pennsylvania, Vermont, Massachusetts, Connecticut, Maryland, Louisiana
Executive order	Arkansas, Mississippi, Florida, New Jersey
Legislation	California, Utah, Wyoming, Kansas, Texas, Illinois, Alaska, Delaware
Legislation and directive policy or executive order	Washington, Oregon, Maine, Ohio, Virginia

Source: Nord & Hoff, 2014.

Searching for a Better Fit

The goal of federal policies that support employment of people with disabilities is to remove barriers and provide protections and incentives to encourage both labor force participation and employment opportunities to meet the needs of the workforce and this population. Such federal initiatives as Ticket to Work and Employment First appear to be moving in the right direction. Executive Order 13548 and changes to Section 503 of the Rehabilitation Act of 1973 as amended may push the needle toward increased hiring of people with disabilities. However, these employment-focused policies treat people with disabilities as a homogenous group and do not differentiate among the support needs and opportunities available to people by disability type. The implementation and uptake of Ticket to Work has been slow since its establishment in 1999, research shows, and the differing needs of people with different disabilities, particularly those with cognitive difficulties, may partly explain why (Cook et al., 2006). In an uncertain job market, policies that do not address the needs and opportunities of people with specific types of disabilities will not be sustainable as these individuals weigh guaranteed benefits against an uncertain future.

Findings of this study should encourage policy makers to take another look at how policy can differentiate among the needs of people with different types of disabilities. All individuals with disabilities should have the opportunity to request the particular supports they need—supports based on policy research and proven practices. Federal policy makers should consider which policies are necessary to support states in their efforts, and state policy makers in turn must consider their economic realities, the types of disabilities of the people they serve, and best practices in working with employers to expand opportunities.

National and state-specific economic challenges have a significant influence on the numbers of people with and without disabilities in the workforce. The availability of jobs that pay competitive wages and offer adequate health benefits and accommodations is a driving factor for moving people into the labor force. Beyond that, policy makers must consider which policies will support people with disabilities in both strong and weak economies to ensure that employment opportunities are open to all Americans. People with disabilities want the same things as people without disabilities—to live fulfilling lives with opportunities to attain education or training, employment, health care, and independent living. Making that possible will require a system that supports each individual with a disability who strives to fully participate in society.

References

- Berry, H. G., & Caplan, L. J. (2010). Employment and earnings growth among transition-age Supplemental Security Income program participants. *Journal of Disability Policy Studies*, 21, 152–159.
- Brault, M. (2009). Review of changes to the measurement of disability in the 2008 American Community Survey. Retrieved from https://www.census.gov/people/disability/files/2008ACS_disability.pdf
- Campbell, T. (2015, January 10). The typical American has this much in retirement savings. How do you compare? *The Motley Fool*. Retrieved from <http://www.fool.com/retirement/general/2015/01/10/the-typical-american-has-this-much-in-retirement-s.aspx>
- Carnevale, A. P., Smith, N., & Strohl, J. (2013). *Recovery: Job growth and education requirements through 2020*. Washington, DC: Georgetown Center on Education and the Workforce.
- Cook, J. A., Leff, H. S., Blyler, C. R., Gold, P. B., Goldberg, R. W., Clark, R. E., ... Burke-Miller, J. K. (2006). Estimated payments to employment service providers for persons with mental illness in the Ticket to Work program. *Psychiatric Services*, 57(4), 465–471.
- Denny-Brown, N., O'Day, B., & McLeod, S. (2015). *Staying employed: Services and supports for workers with disabilities*. *Journal of Disability Policy Studies*, doi: 10.1177/1044207315583899.
- Ehrenberg, R. G., & Smith, R. S. (2011). *Modern labor economics: Theory and public policy* (11th ed.). Upper Saddle River, NJ: Prentice Hall.
- Hasnain, R., & Balcazar, F. (2009). Predicting community- versus facility-based employment for transition-aged young adults with disabilities: The role of race, ethnicity, and support systems. *Journal of Vocational Rehabilitation*, 31, 175–188.
- Holland, J. (2011, August 30). The 10 states with the worst economies in America. *Alternet*. Retrieved from http://www.alternet.org/story/152234/the_10_states_with_the_worst_economies_in_america
- Holodny, E., & Kiersz, A. (2014, September 8). RANKED: The 50 US state economies from worst to best. *Business Insider*. Retrieved from <http://www.businessinsider.com/ranked-the-50-us-state-economies-2014-8#channel=f6309071a8d60e&origin=http%3A%2F%2Fwww.businessinsider.com>
- Institute for Community Inclusion. (2005). What do vocational rehabilitation (VR) services cost? *Data Note, 1*. Retrieved from https://www.communityinclusion.org/article.php?article_id=167

- Nord, D., & Hoff, D. (2014). Employment First across the nation: Progress on the policy front. *Policy Research Brief*, 24(1). Retrieved from <http://rtc.umn.edu/prb/214/>
- U.S. Bureau of Labor Statistics. (2014, October 10). *Ted: The economics daily*. Retrieved from http://www.bls.gov/opub/ted/2014/ted_20141010.htm
- U.S. Census Bureau. (2001–2013). *American Community Survey*. Retrieved from <http://www.census.gov/programs-surveys/acs/>
- U.S. Office of Personnel Management. (2014). *Report on the employment of individuals with disabilities in the federal executive branch for fiscal year 2013*. Retrieved from <https://www.opm.gov/policy-data-oversight/diversity-and-inclusion/reports/disability-report-fy2013.pdf>
- Winship, M. (2013, September 10). In Los Angeles, labor redefines itself [Blog post]. *Huffington Post*. Retrieved from http://www.huffingtonpost.com/michael-winship/in-los-angeles-labor-rede_b_3902644.html
- Yin, M., Shaewitz, D., & Megra, M. (2014). An uneven playing field: The lack of equal pay for people with disabilities. Washington, DC: American Institutes for Research. Retrieved from http://www.air.org/sites/default/files/Lack%20of%20Equal%20Pay%20for%20People%20with%20Disabilities_Dec%2014.pdf.

Appendix A: State Tables

Table A1. Labor Participation Rate of People With Disability by Disability Type

State	Cognitive difficulties	Ambulatory difficulties	Vision or hearing difficulties	Self-care difficulties
Alabama	23.74	21.96	42.96	14.19
Alaska	38.41	42.29	60.56	33.82
Arizona	24.87	26.72	45.64	13.78
Arkansas	21.10	19.48	43.38	10.85
California	26.65	27.52	48.79	16.38
Colorado	30.26	31.89	59.06	16.83
Connecticut	39.95	34.02	64.49	22.11
Delaware	27.64	27.46	56.59	13.16
District of Columbia	35.83	27.80	45.89	10.71
Florida	25.40	26.93	48.00	16.70
Georgia	27.25	26.30	48.97	17.00
Hawaii	26.24	31.93	61.33	22.31
Idaho	31.41	23.36	55.03	11.65
Illinois	29.40	29.70	55.79	19.49
Indiana	29.04	27.72	52.46	19.39
Iowa	36.07	31.39	60.00	22.00
Kansas	32.61	30.65	58.37	24.53
Kentucky	22.63	20.88	40.97	13.24
Louisiana	28.04	23.34	47.09	14.20
Maine	24.91	24.22	53.85	12.27
Maryland	33.91	35.91	60.38	23.65
Massachusetts	31.12	27.95	50.81	17.25
Michigan	28.40	23.62	48.32	15.87
Minnesota	39.90	35.00	64.25	26.34
Mississippi	22.49	20.97	41.05	14.51
Missouri	25.62	24.01	47.19	15.08
Montana	34.98	31.98	54.90	31.82
Nebraska	31.68	28.45	66.03	19.23
Nevada	31.82	33.47	56.84	20.00
New Hampshire	36.41	32.06	58.93	15.53
New Jersey	31.56	31.97	57.31	18.40

State	Cognitive difficulties	Ambulatory difficulties	Vision or hearing difficulties	Self-care difficulties
New Mexico	29.91	28.06	44.08	13.58
New York	27.25	28.25	50.49	17.64
North Carolina	27.68	25.17	48.79	14.72
North Dakota	37.58	28.12	61.94	17.58
Ohio	28.44	25.82	51.18	16.85
Oklahoma	26.38	27.73	48.47	17.33
Oregon	28.85	26.61	49.86	16.08
Pennsylvania	29.31	26.34	52.91	17.09
Rhode Island	35.19	28.85	59.14	25.42
South Carolina	24.56	24.33	47.60	15.03
South Dakota	36.22	32.47	65.45	21.36
Tennessee	22.78	23.88	45.16	12.95
Texas	28.25	28.46	51.90	16.37
Utah	32.59	31.40	60.00	22.71
Vermont	25.58	24.21	59.24	10.29
Virginia	30.10	27.20	52.72	15.04
Washington	31.79	30.63	55.36	18.49
West Virginia	17.62	20.31	35.99	11.70
Wisconsin	36.82	31.44	59.32	22.39
Wyoming	38.10	43.37	71.50	33.33

Table A2. Employment Rate of People With Disability by Disability Type

State	Cognitive difficulties	Ambulatory difficulties	Vision or hearing difficulties	Self-care difficulties
Alabama	17.36	17.60	39.69	12.19
Alaska	30.46	36.82	58.91	19.42
Arizona	18.11	22.74	42.82	11.97
Arkansas	16.11	16.94	35.36	8.90
California	19.39	22.06	44.96	14.18
Colorado	22.94	26.53	62.68	24.13
Connecticut	30.02	27.63	51.61	7.77
Delaware	19.51	23.12	48.69	16.23
District of Columbia	25.67	21.97	45.02	15.81
Florida	17.79	21.64	41.96	8.77
Georgia	18.71	20.38	42.31	5.88

State	Cognitive difficulties	Ambulatory difficulties	Vision or hearing difficulties	Self-care difficulties
Hawaii	22.7	29.82	49.30	13.51
Idaho	24.85	18.80	40.96	12.02
Illinois	21.91	24.53	43.78	12.19
Indiana	22.89	23.36	57.03	20.45
Iowa	29.35	28.10	55.31	12.62
Kansas	26.98	27.09	53.11	19.81
Kentucky	16.11	17.42	34.40	9.99
Louisiana	21.07	19.45	40.70	13.02
Maine	19.25	20.9	44.59	14.47
Maryland	25.75	30.55	58.71	27.94
Massachusetts	23.53	22.77	46.63	12.57
Michigan	21.30	18.28	36.41	10.07
Minnesota	33.88	30.47	61.36	14.29
Mississippi	16.14	16.73	32.20	10.94
Missouri	19.12	20.44	51.71	7.14
Montana	28.98	26.45	54.56	21.19
Nebraska	26.49	25.98	39.73	11.56
Nevada	23.03	28.32	54.52	20.09
New Hampshire	28.80	28.82	58.57	17.48
New Jersey	24.28	25.68	49.44	14.07
New Mexico	24.4	24.72	50	12.83
New York	20.27	22.98	46.91	13.23
North Carolina	21.40	20.02	50.89	10.60
North Dakota	32.21	25.00	47.51	16.25
Ohio	21.87	21.37	41.89	13.28
Oklahoma	21.41	24.02	53.13	17.31
Oregon	21.97	21.12	54.14	22.10
Pennsylvania	22.20	21.63	42.40	11.53
Rhode Island	28.40	22.62	49.25	13.31
South Carolina	18.65	20.01	41.35	11.04
South Dakota	32.14	27.68	56.07	20.29
Tennessee	17.3	19.61	42.27	14.02
Texas	22.09	24.20	47.99	20.00
Utah	27.03	27.83	49.30	17.14
Vermont	20.93	18.95	40.10	11.89

State	Cognitive difficulties	Ambulatory difficulties	Vision or hearing difficulties	Self-care difficulties
Virginia	24.30	23.58	47.10	13.31
Washington	22.69	25.50	38.57	9.53
West Virginia	14.18	17.20	39.21	11.20
Wisconsin	29.62	27.19	55.93	28.79
Wyoming	35.71	38.55	67.36	29.63

Table A3. Percentage of People With Disability by State and Disability Type

State	Cognitive difficulties	Ambulatory difficulties	Vision or hearing difficulties	Self-care difficulties
Alabama	6.48	10.09	5.69	3.36
Alaska	3.91	5.21	5.52	1.76
Arizona	4.71	6.05	4.55	2.23
Arkansas	7.15	10.43	6.05	3.46
California	4.14	4.63	3.31	1.91
Colorado	4.32	4.75	4.02	1.67
Connecticut	4.00	4.24	3.19	1.88
Delaware	5.01	7.05	4.18	2.32
District of Columbia	4.40	5.25	3.43	1.98
Florida	4.81	6.39	4.10	2.23
Georgia	4.96	6.86	4.55	2.35
Hawaii	3.45	3.49	3.13	1.59
Idaho	5.92	6.45	5.26	2.43
Illinois	4.23	5.37	3.54	2.06
Indiana	5.75	7.37	4.89	2.54
Iowa	4.67	5.47	3.71	2.03
Kansas	4.87	5.95	4.50	2.31
Kentucky	7.12	9.67	5.74	3.26
Louisiana	5.94	8.24	5.71	3.08
Maine	7.30	7.05	4.66	2.25
Maryland	3.87	4.66	3.24	1.51
Massachusetts	4.96	4.75	3.25	2.08
Michigan	6.25	7.38	4.65	2.91
Minnesota	4.55	4.20	3.57	1.75
Mississippi	7.63	10.69	6.54	3.59
Missouri	6.42	7.70	5.21	2.56

State	Cognitive difficulties	Ambulatory difficulties	Vision or hearing difficulties	Self-care difficulties
Montana	5.04	6.13	5.10	2.35
Nebraska	3.95	4.74	4.08	1.52
Nevada	4.29	6.32	4.85	2.05
New Hampshire	4.76	4.40	3.62	1.33
New Jersey	3.51	4.35	2.99	1.80
New Mexico	6.21	7.48	5.70	2.79
New York	4.36	5.31	3.22	2.07
North Carolina	5.50	7.52	4.48	2.79
North Dakota	3.67	4.73	3.82	2.24
Ohio	5.80	6.96	4.31	2.52
Oklahoma	6.19	9.36	6.23	3.07
Oregon	6.04	6.52	4.70	2.42
Pennsylvania	5.28	5.90	3.77	2.22
Rhode Island	5.30	4.99	3.04	1.93
South Carolina	5.76	7.88	5.04	2.77
South Dakota	4.23	5.84	4.74	2.22
Tennessee	6.69	8.77	5.42	3.00
Texas	4.60	6.10	4.58	2.20
Utah	4.11	4.39	3.69	1.50
Vermont	4.66	5.15	4.25	1.84
Virginia	4.32	5.16	3.47	1.95
Washington	5.09	5.66	4.40	2.02
West Virginia	7.60	11.86	7.42	3.82
Wisconsin	4.42	5.08	3.82	2.01
Wyoming	3.80	5.00	5.82	1.63

Appendix B: Full Regression Tables

Table B1. Regression Analysis Results of Differences in Labor Participation and Employment by Disability Type, Controlling for Individual Characteristics

Variables (Omitted group: ambulatory difficulties)	(1) Labor force participation (standard deviation)	(2) Employment status (standard deviation)
Vision or hearing difficulties	0.208**	0.0860**
	(0.0168)	(0.0281)
Self-care difficulties	-0.853**	0.0450
	(0.0204)	(0.0552)
Cognitive difficulties	-0.979**	-0.640**
	(0.0176)	(0.0267)
Other difficulties	-0.894**	-0.418**
	(0.0253)	(0.0284)
Age	0.0620**	0.00683
	(0.00383)	(0.00751)
Age square	-0.00108**	9.52e-05
	(4.10e-05)	(9.14e-05)
Female	-0.120**	0.199**
	(0.0134)	(0.0239)
Black	-0.161**	-0.496**
	(0.0320)	(0.0337)
American Indian	-0.244**	-0.561**
	(0.0556)	(0.142)
Hispanic	0.0915**	-0.0644
	(0.0325)	(0.0624)
Asian	0.128*	0.0650
	(0.0548)	(0.109)
Two or more races	-0.122**	-0.224**
	(0.0469)	(0.0782)
Other race	0.192 [†]	-0.237
	(0.105)	(0.170)
Married without spouse present	-0.565**	-0.591**
	(0.0385)	(0.0747)
Separated	-0.289**	-0.717**
	(0.0293)	(0.0552)
Divorced	-0.235**	-0.562**
	(0.0168)	(0.0349)

Variables (Omitted group: ambulatory difficulties)	(1) Labor force participation (standard deviation)	(2) Employment status (standard deviation)
Widowed	−0.408** (0.0285)	−0.487** (0.0695)
Single	−0.411** (0.0283)	−0.457** (0.0414)
GED_HS	0.459** (0.0248)	0.294** (0.0422)
Some college	0.730** (0.0262)	0.377** (0.0399)
Associates degree	0.975** (0.0313)	0.446** (0.0598)
Bachelor's degree	1.226** (0.0260)	0.715** (0.0626)
Master's degree	1.422** (0.0459)	0.863** (0.0663)
Doctoral degree	1.680** (0.0983)	−0.318** (0.0356)
Professional degree	1.517** (0.0550)	−0.652** (0.0719)
Move within state	−0.280** (0.0253)	1.100** (0.132)
Move between states	−0.253** (0.0418)	0.908** (0.150)
Move abroad	0.0599 (0.146)	0.0322 (0.215)
Observations	206,376	79,346

Note. Robust standard errors in parentheses. (State indicators were included in all regressions to control for potential economic and policy variations at the state level.) [†] $p < .10$. * $p < .05$. ** $p < .01$.

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