Employment of Persons with a Disability: Analysis of Trends during the COVID-19 Pandemic

Office of Disability Employment Policy

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In the latter part of 2019 and in early 2020, the labor market outcomes for persons with a disability were some of the best on record since 2008, when monthly employment data for persons with a disability became available.[1] After peaking at 16.9 percent in June 2011, the unemployment rate for persons with a disability steadily declined and reached a low of 6.1 percent in September 2019. In February 2020, before the current recession, the unemployment rate for persons with a disability was 7.8 percent, the employment-population ratio was 19.1 percent, and the labor force participation rate was 20.7 percent.[2]

Since February 2020 and the beginning of the COVID-19 pandemic, there have been unprecedented changes in employment. To limit the spread of COVID-19, many firms and establishments ceased or scaled back operations, and the public has practiced social-distancing to varying degrees.[3] According to the Centers for Disease Control and Prevention (CDC), 42 states implemented mandatory stay-at-home orders between March 2020 and May 2020, and an additional eight states implemented advisory stay-at-home directives (Moreland et al. 2020). Often businesses that were deemed essential were allowed to remain open, whereas non-essential businesses had to close or to limit operations. These rapid and unprecedented developments have had a major impact on employment in general, and it is important to examine the impact on the employment of persons with a disability.

This brief presents analysis of trends in key labor force statistics from the Current Population Survey (CPS)[4] for persons with and without disabilities to provide insight into employment trends since the beginning of the COVID-19 pandemic through December 2020. In addition, this brief explores two key aspects of occupations and industries that have been associated with employment outcomes since February 2020 (prior to the impact of COVID-19): whether or not it is

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[1] Specific measures regarding the employment of persons with a disability have been available since June 2008, when the Current Population Survey began asking questions to determine the functional capacity of individuals. The CPS includes six questions that ask whether a person: 1) is deaf or has serious difficulty hearing, 2) is blind or has serious difficulty seeing (even with corrective lenses), 3) has serious difficulty concentrating, remembering, or making decisions, 4) has serious difficulty walking or climbing stairs, 5) has difficulty dressing or bathing, and 6) has difficulty doing errands alone. Respondents are defined as having a disability if they respond affirmatively to any one of six questions asking about functional difficulties.

[2] The *unemployment rate* is the number of unemployed persons as a percentage of those individuals who are in the labor force. The *labor force participation rate* is the percentage of the population that is either working or actively seeking work. The *employment-population ratio* is the percentage of the population that is currently working. For more information, visit https://bls.gov/cps.

[3] For more information on social distancing: https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html

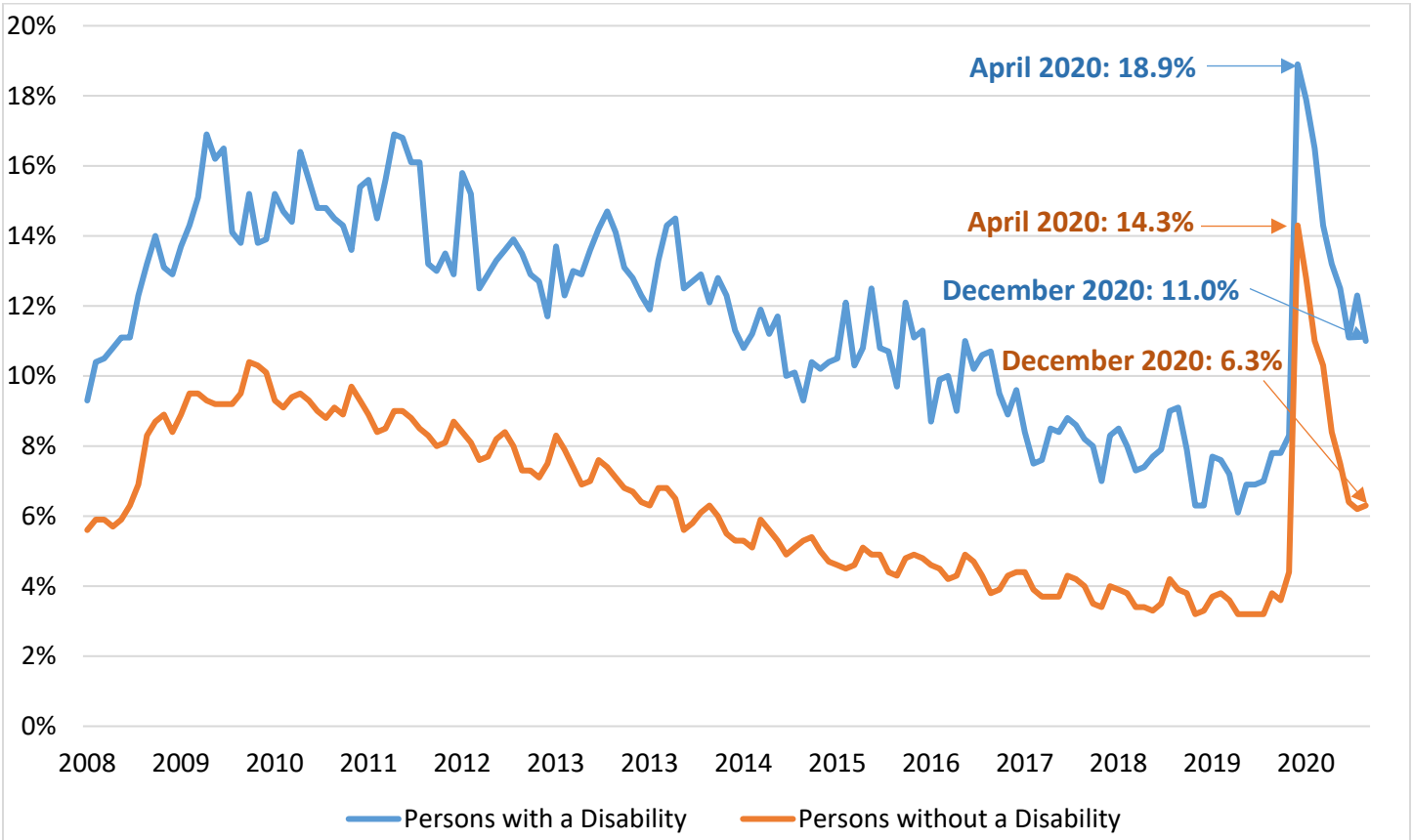
[4] The Current Population Survey is a monthly survey conducted by the Census Bureau for the Bureau of Labor Statistics reaching approximately 60,000 households, with most information collected at the individual level. It is the source of official Government statistics on employment and unemployment, and collects information on the demographic status of the population.

possible to perform a job at home (i.e., telework), and whether or not a job requires workers to be in close proximity with others (i.e., contact intensity). This analysis uses independent research to define the types of jobs that might be performed at home, and the level of contact intensity for particular types of jobs, in order to assess employment outcomes for persons with and without a disability by these job characteristics.

Historical Unemployment Rate and Proportion of the Unemployed on Layoff

Figure 1 presents the seasonally-unadjusted monthly unemployment rate for persons with and without a disability ages 16 and over from June 2008 to December 2020. While volatile on a month-to-month basis, unemployment rates for persons age 16 and over with and without disability were trending downward from September 2011 until February 2020. However, as Figure 1 shows, the unemployment rate for both groups increased dramatically in April 2020 but then declined steadily until October 2020.

Figure 1. Unemployment Rate for Persons with and without a Disability

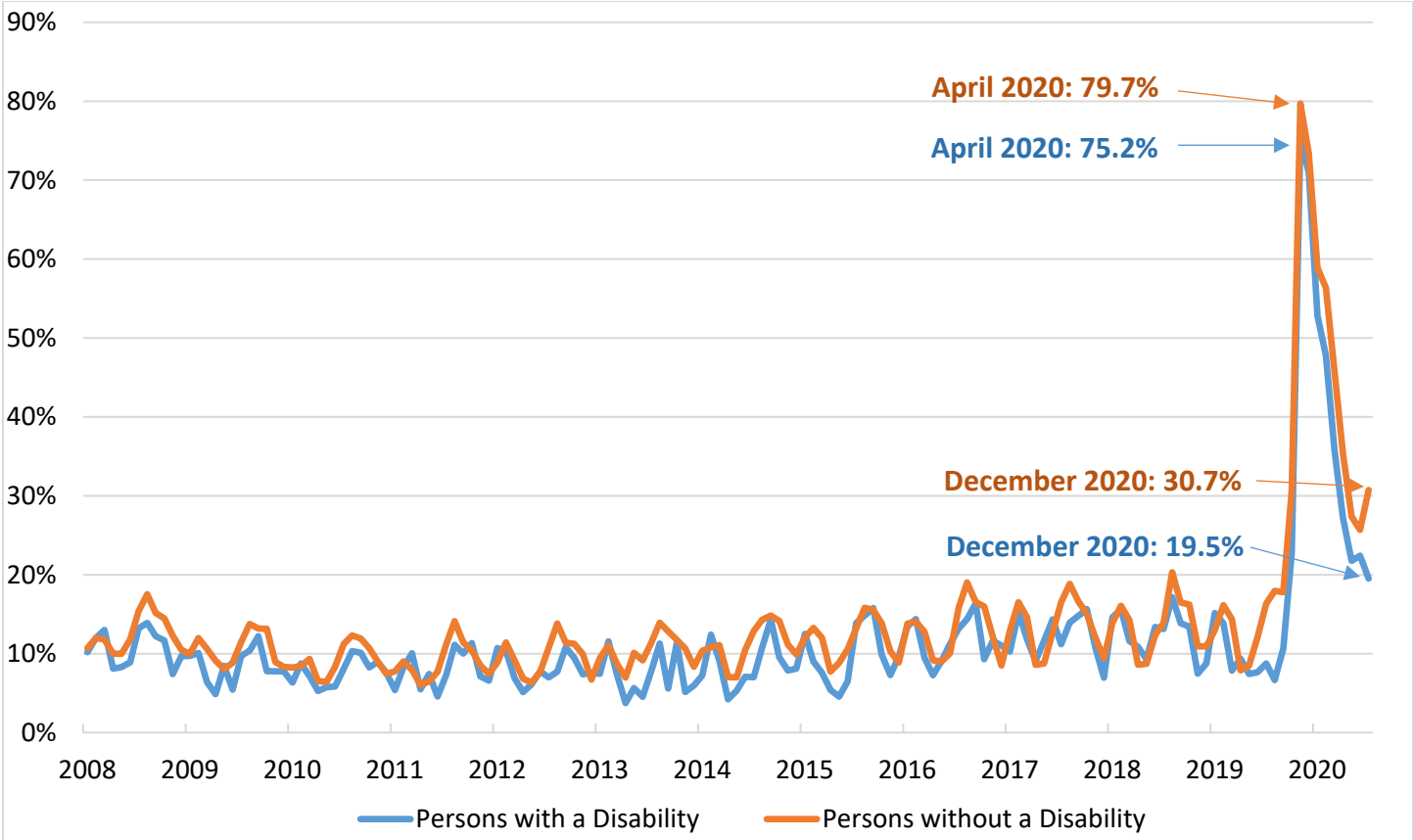


Notes: This figure presents monthly unemployment rates for persons with and without a disability from June 2008 (when the data became available) until December 2020.
Source: Current Population Survey. Table A-6. Employment status of the civilian population by sex, age, and disability status, not seasonally adjusted, available at https://www.bls.gov/webapps/legacy/cpsatab6.htm

Unemployed persons may be "on layoff" – and expecting to return to work – or may have lost their job and be seeking employment. Figure 2 reports the seasonally unadjusted proportion of the unemployed who are on layoff, for persons with and without a disability. From June 2008 until February 2020, those on layoff typically constitute less than 20

percent of the total number of unemployed, and more than 80 percent typically do not have a job and are actively looking for work. While there are monthly fluctuations, the proportions of the unemployed on layoff follow a similar trend and magnitude for persons with and without a disability. However from February 2020 to April 2020, the proportion of the unemployed on layoff increased by approximately 60 percentage points for both persons with and without a disability. A high proportion of the unemployed on layoff indicates that a greater share of the unemployed remain attached to their employer, and to this extent may be more likely to return to work. Since April 2020, the proportion of the unemployed on layoff declined for both groups, yet remained elevated as of December 2020.

Figure 2. Proportion of the Unemployed on Layoff – Persons with and without a Disability



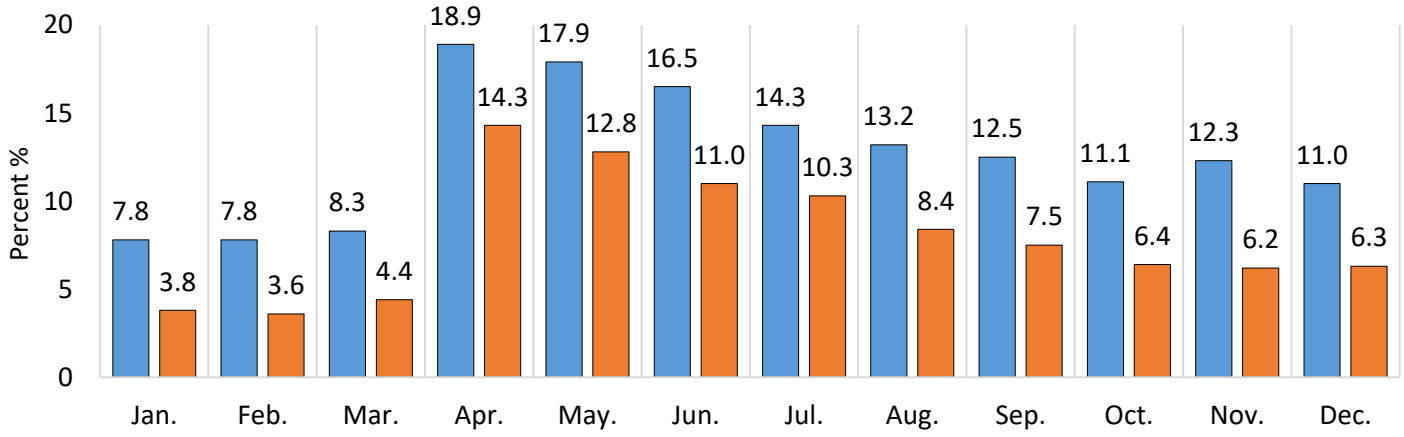
Notes: This figure presents the proportion of the unemployed on layoff for persons with and without a disability from June 2008 to December 2020.
Source: Current Population Survey.

Key Labor Force Statistics for Persons with and without a Disability in 2020

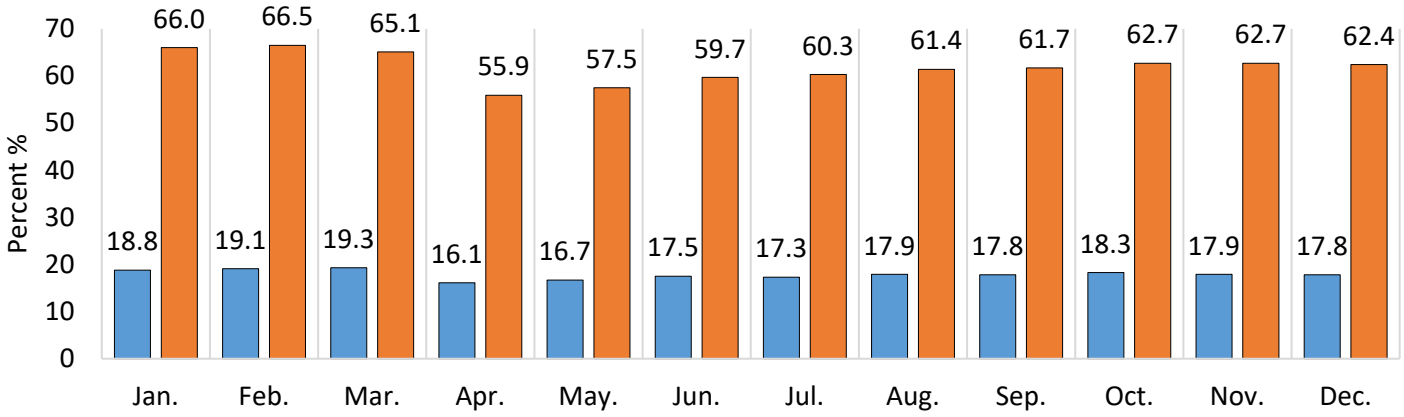
Figure 3 presents key labor force statistics – the unemployment rate (Figure 3A), employment-population ratio (Figure 3B), and the labor force participation rate (Figure 3C) – for persons with and without a disability ages 16 and above from January 2020 to December 2020. During this period, persons with and without a disability experienced increases in unemployment rates, and declines in employment-population ratios and labor force participation rates. The most dramatic changes for both groups occurred from March 2020 to April 2020 when the entire country felt the impact of the COVID-19 pandemic. There were, however, labor market improvements from April 2020 to December 2020.

Figure 3. Labor Force Statistics for Persons with and without a Disability: 2020

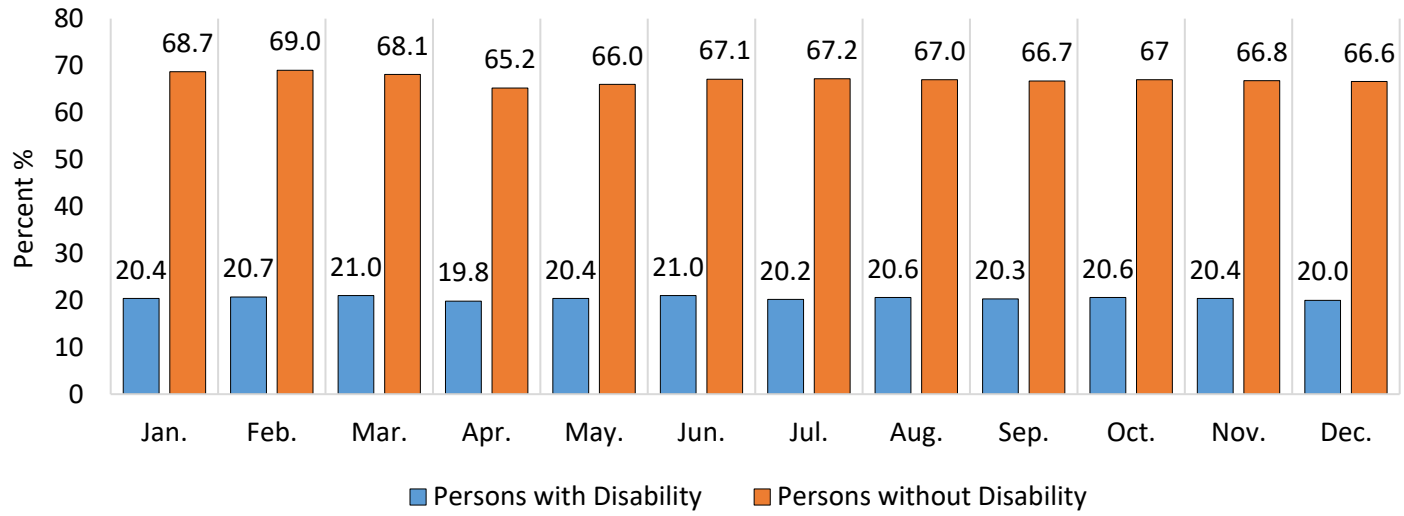
3A - Unemployment Rate



3B - Employment -Population Ratio



3C - Labor Force Participation Rate



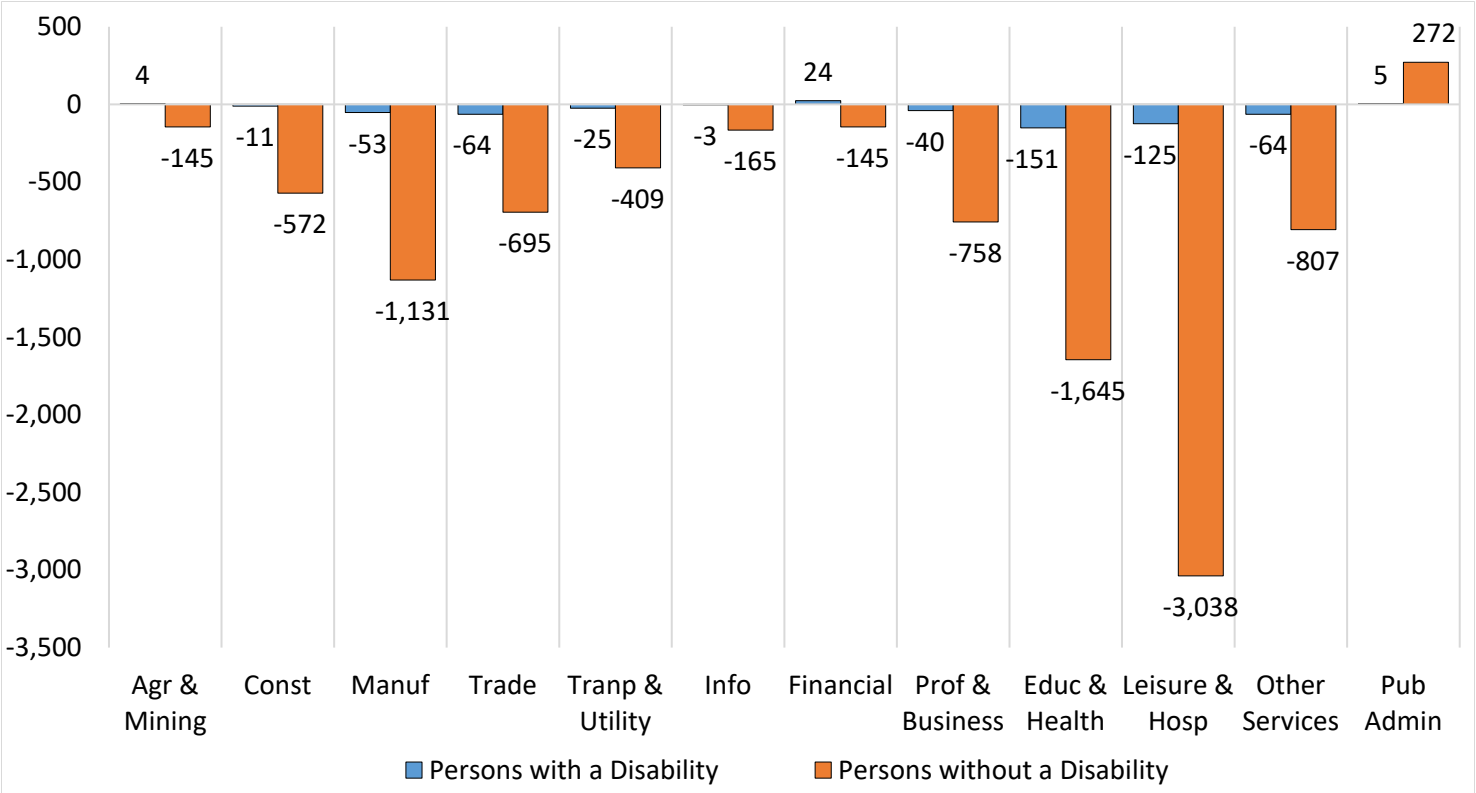
Note: Monthly unemployment rates, employment-population ratios, and labor force participation rates for persons age 16 and older with and without a disability from January 2020 to December 2020.

Source: Current Population Survey, Table A-6: Employment status of the civilian population by sex, age, and disability status, not seasonally adjusted. Available at: https://www.bls.gov/webapps/legacy/cpsatab6.htm

Net Change in Employment by Industry and Occupation: 2019 to 2020

Figure 4 presents the net changes in average annual employment *by industry* for persons with and without a disability from 2019 to 2020. This analysis uses twelve groups of industries based on the CPS classification system.[5] Employment among persons with a disability declined by the greatest amount in Educational & Health Care Services and Leisure & Hospitality. Among persons with a disability, employment declined in nine of the twelve industries, but increased in three industries: Agriculture & Mining, Financial Activities, and Public Administration. Employment among persons without a disability declined by the greatest amount in: Leisure & Hospitality, Educational & Health Care Services, and Manufacturing. Employment declined in eleven of the twelve industries for persons without a disability and increased in Public Administration.

Figure 4. Net Change in Employment (000's) by Industry Group and Disability Status: 2019 to 2020

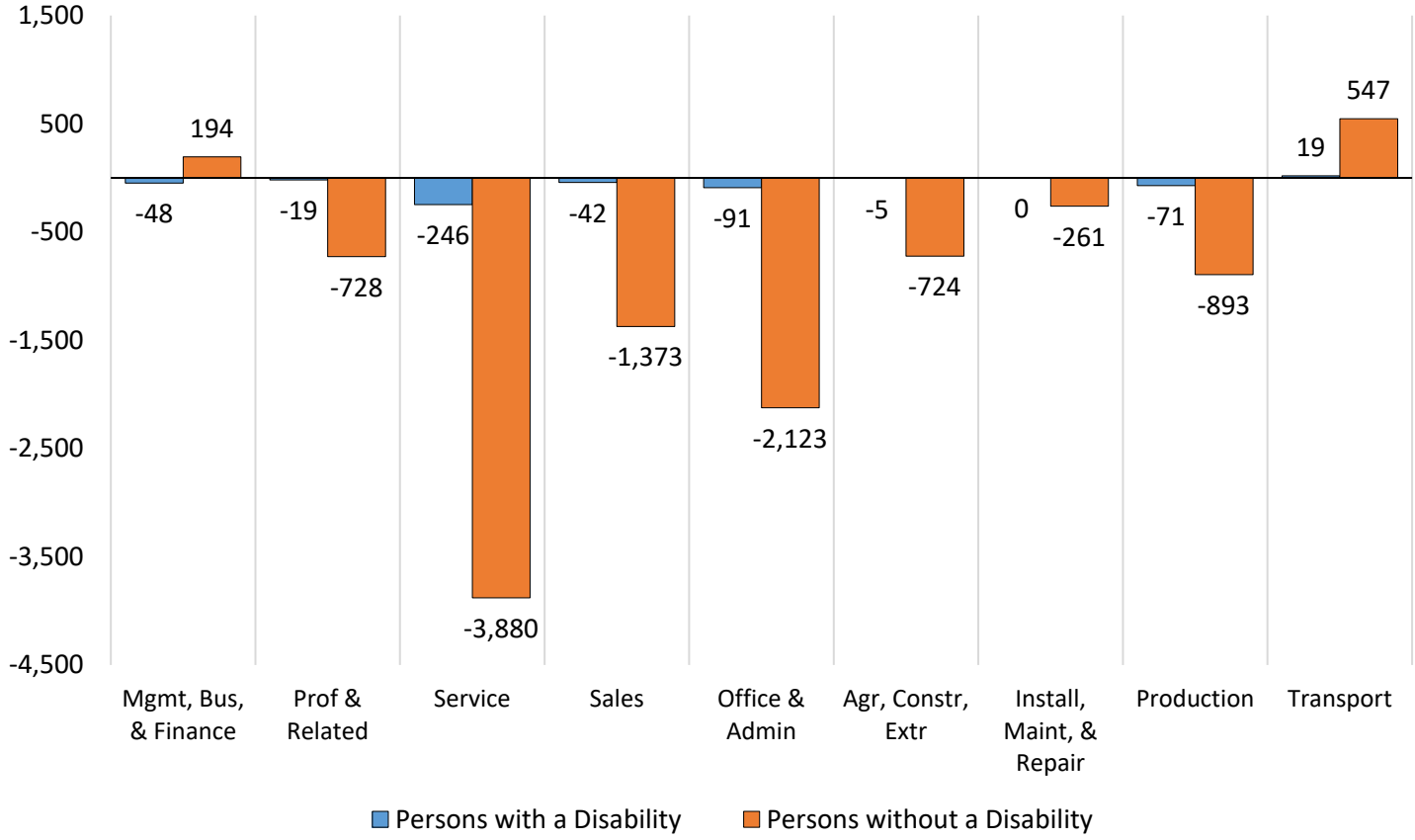


Notes: This figure presents the net change in average annual employment from 2019 to 2020 *by industry* for workers with and without a disability. The net change in emploment is reported in the thousands (000's). The industry categories are: Agriculture and Mining (Agr & Mining); Construction (Const); Manufacturing (Manuf); Wholesale and Retail Trade (Trade); Transportation and Utilities (Transp & Utility); Information (Info); Financial Activities (Financial); Pofessional and Business Services (Prof & Business); Educational and Health Care Services (Educ & Health); Leisure and Hospitality (Leisure & Hosp); Other Services; Public Administration (Pub Admin).
Source: Current Population Survey.

[5] Industry classification codes in the CPS represent the Census 2002 classification system, and were developed using the North American Industry Classification System (NAICS). Industry codes are 4-digit, yet this brief uses a common categorization of industry at the 2-digit level to 14 major industry groups. However, we combine the Agriculture and Mining industries and do not include those in the Armed Forces industry.

Figure 5 presents the net change in average annual employment *by occupation* for workers with and without a disability from 2019 to 2020. This analysis uses nine groups of occupations based on the CPS classification system.[6] The largest declines in employment for both persons with and without a disability occurred in the Service occupational group. Among persons with a disability, employment declined in eight of nine occupation groups, and among persons without a disability, employment declined in seven of nine occupation groups.

Figure 5. Net Change in Employment (000's) by Occupation Group and Disability Status: 2019 to 2020



Notes: This figure presents the net change in average annual employment from 2019 to 2020 *by occupation* for persons with and without a disability. The net change in emploment is reported in the thousands (000's). The occupation categories are: Management, Business, and Finance (Mgmt, Bus, & Finance); Professional and Related (Prof & Related); Service; Sales; Office and Administrative (Office & Admin); Agriculture, Construction, and Extraction (Agr, Const, & Extraction); Installation, Maintenance, and Repair (Install, Maint, & Repair); Production; and Transportation (Transport).
Source: Current Population Survey.

[6] Occupation classification codes in the CPS represent the Census 2010 classification system and were developed using the Standard Occupational Classification (SOC) Manual: 2010. This brief uses nine major occupation groups, not including Armed Forces.

Changes in Employment by Industry and Occupation: 2019 to 2020

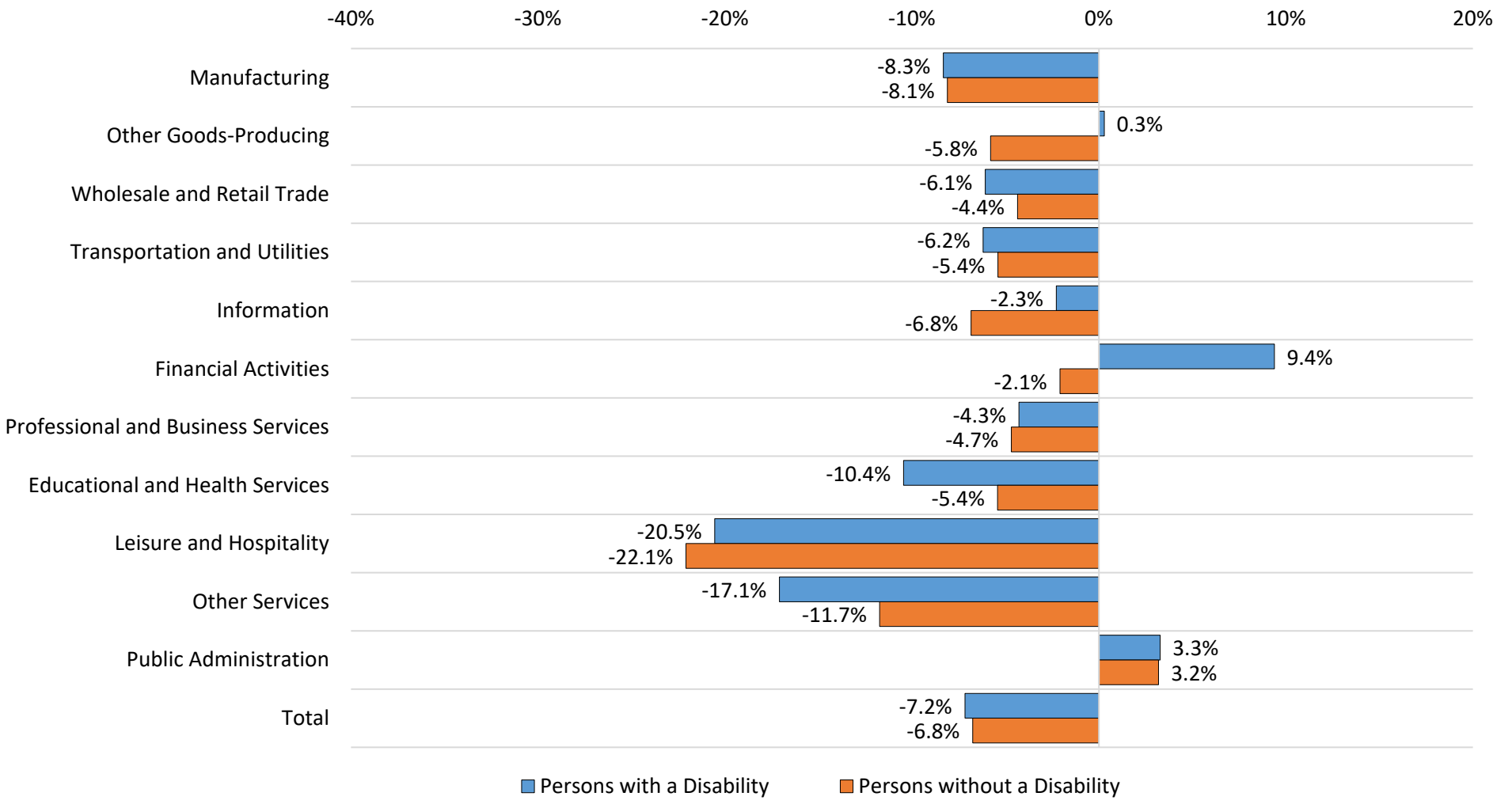
Figures 6 and 7 report the percentage change in average annual employment by industry and occupation for persons with and without a disability, from 2019 to 2020, adjusted for changes in the population.[7] These figures provide insight into which industries and occupations have experienced the largest *within-group* changes and do not account for the *total share* of employment in the U.S. represented by each group.

As shown in Figure 6, the percentage change in employment varied considerably across industry groups. The highest percentage reductions both for persons with a disability and persons without a disability occurred in the Leisure & Hospitality and Other Services industry groups. Public Administration was the only industry with an increase in employment for both persons with and without disability, while employment of persons with disability also increased in the Financial Activities and Other Goods-Producing (an aggregate of Construction, Agriculture, and Mining) groups.

As Figure 7 shows, the largest percentage declines in employment by occupation group for both persons with and without a disability were in Service, Production, and Office and Administrative occupations. Overall, *within-group* employment for persons with a disability declined in seven occupation groups and increased in two occupation groups. Among persons without a disability, the percentage change in employment decreased across all occupation groups except for Transportation and Material Moving and Management, Business, and Financial occupations.

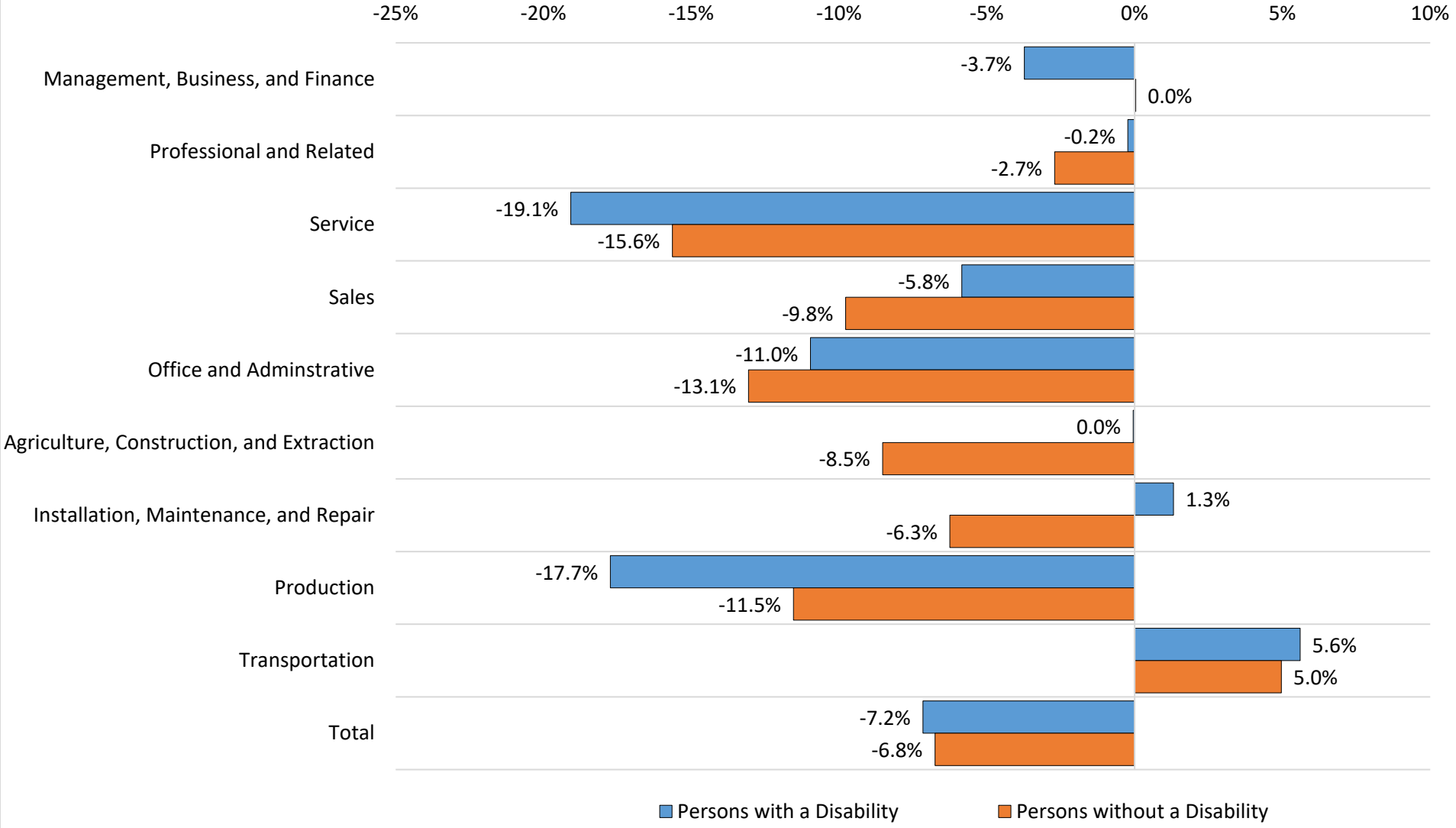
[7] The data in Figures 6 and 7 are computations using CPS population and employment data. To adjust for changes in the population, these Figures present changes in employment-population ratios for the specified group. For example, from February 2020 to December 2020, the total number of employed persons with a disability declined from 5.91 million in February to 5.31 million in December, which is equivalent to a 10.1 percent decline in employment. However, the population of persons with disabilities, as measured in the CPS, also declined during this period by 3.5 percent, from 30.95 million in February to 29.86 million in September. In this example, the population-adjusted change in employment from February to December 2020 is negative 6.9 percent.

Figure 6. Change in Employment by Industry Group and Disability Status: 2019 to 2020 (Population-Adjusted)



Notes: This chart presents the population-adjusted percentage changes in avearge annual emplyoment from 2019 to 2020, by major industry group for persons with and without disabilities. Each percentage change represents the change in employment-to-population ratios for the specified group.
Source: Current Population Survey

Figure 7. Change in Employment by Occupation Group and Disability Status: 2019 to 2020 (Population-Adjusted)



Notes: This chart presents the population-adjusted percentage change in average annual employment from 2019 to 2020, by occupation group for persons with and without a disability. Each percentage change represents the change in employment-population ratios for the specified group.
Source: Curent Population Survey

Change in Employment by Potential Availability of Telework and Level of "Contact Intensity"

Two key aspects of occupations and industries that are associated with employment outcomes during the COVID-19 pandemic have been whether or not it is possible to perform a job at home (i.e., telework), and whether or not a job requires workers to be in close proximity with others (i.e., level of contact intensity). This analysis uses independent research, described below, to define the types of jobs that can be performed at home and the level of contact intensity for particular types of jobs to assess employment outcomes for persons with and without a disability.

Figure 8 presents the percentage change in population-adjusted average annual employment from 2019 to 2020 for workers with and without a disability by the availability of telework in their occupation group. To determine the availability of telework by occupation group, this analysis uses estimates of the percentage of jobs that can potentially be performed at home by two-digit Standard Occupational Classification (SOC) major group code as reported in Dingel and Neiman (2020). Dingel and Nieman use the Department of Labor's O*NET database, which contains hundreds of standardized and occupation-specific descriptors on almost 1,000 occupations, to estimate which occupations may be performed at home.[8] The occupation groups with the highest proportion of jobs that may be performed at home are: Computer and Mathematical Occupations; Education, Training, and Library Occupations; and Legal Occupations. Three occupation groups do not include any jobs that may be performed at home: Construction and Extraction Occupations; Food Preparation and Serving Related Occupations; and Building and Grounds Cleaning and Maintenance Occupations.

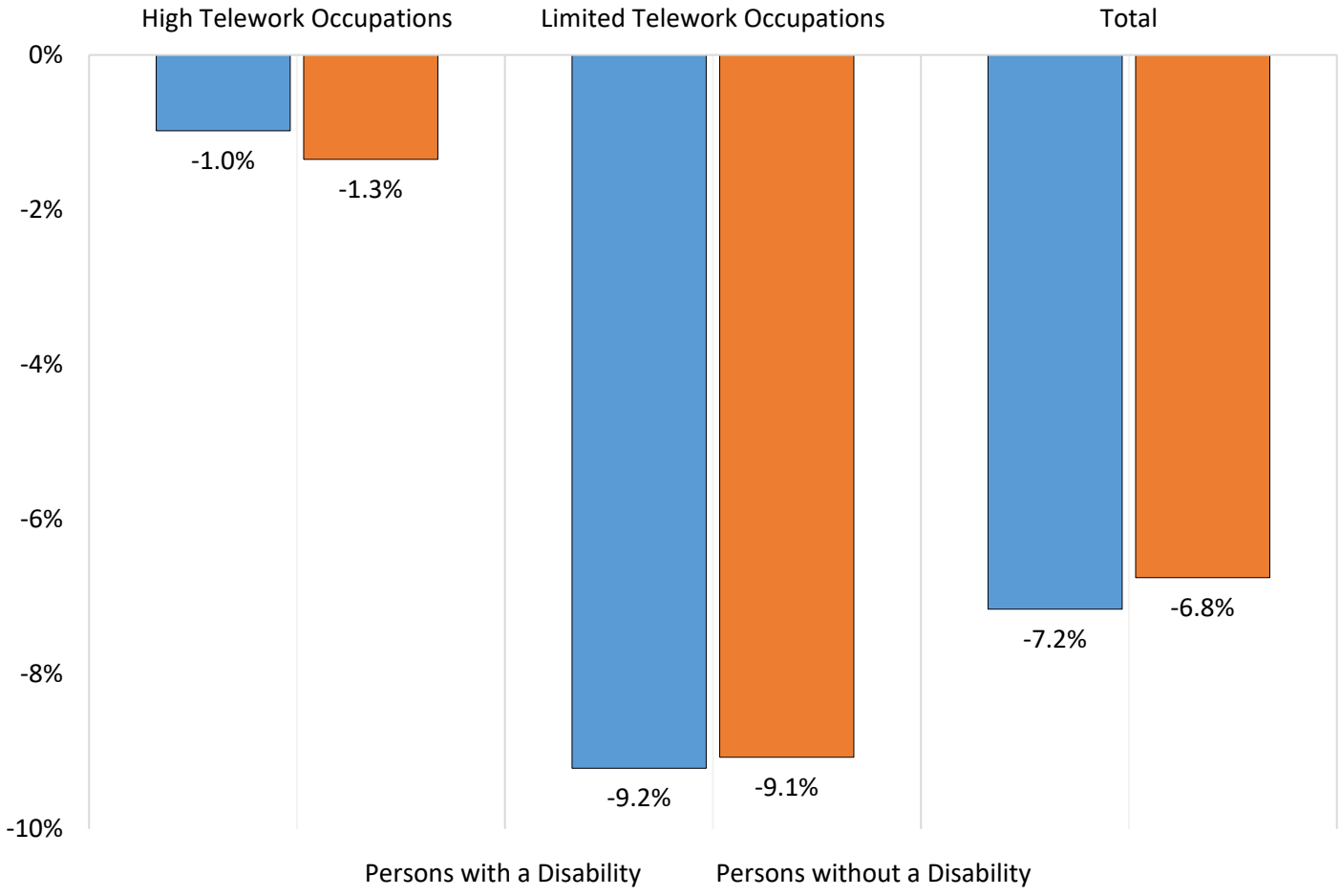
Using the estimates from Dingel and Nieman, this analysis groups workers into a "high telework occupation" if 75 percent or more of the jobs in the occupation group can be performed at home. The remainder of workers are classified as being in a "limited telework occupation." In 2020, approximately 27 percent of workers with a disability and 32 percent of workers without a disability were in high telework occupations, respectively.

As shown in Figure 8, employment declined more for workers in limited telework occupations categories compared to workers in high telework occupations, both for persons with and without a disability. These results suggest that workers in high telework occupations were not impacted by the pandemic economy to the same extent that workers in limited telework occupations were. However, these results only show an association and do not imply that the availability of

[8] Dingel and Nieman categorize a job as being unable to be performed at home if any one of nine conditions are true for the average respondent in the Work Context Questionnaire, or if any one of eight conditions are true for the average respondent in the Generalized Work Activities Questionnaire. For example, if the average respondent answers that "handing and moving objects is very important" (Generalized Work Activities Q17A), then the job is classified as not able to perform at home. For the full list of criteria, please refer to the Dingel and Nieman (2020) paper.

telework was the only factor influencing employment. A number of other factors can influence employment changes such as industry, location, and worker characteristics.

Figure 8. Change in Employment by Availability of Telework and Disability Status: 2019 to 2020 (Population-Adjusted)



Notes: This chart presents findings from the Current Population Survey of the population-adjusted percentage change in average annual employment from 2019 to 2020 for persons with and without a disability, *by the availability of telework in their occupation group.* Workers in an occupation group where more than 75 percent of the jobs can be performed at home are classified as being in a "high telework occupation" and others are classified as being in "limited telework occupations." Each percentage change represents the change in employment-to-population ratios for the specified group. The percent of jobs that can be performed at home by occupation group comes from Dingel and Neiman (2020).

Figure 9 presents the population-adjusted percentage change in employment from 2019 to 2020 for workers with and without a disability based on the level of "contact intensity" in their occupation group. To estimate the level of contact intensity by occupation group, this analysis relies on estimates from Leibovici et al. (2020). Leibovici et al. use the Department of Labor's O*NET occupational database, which includes a question on the extent to which a job requires

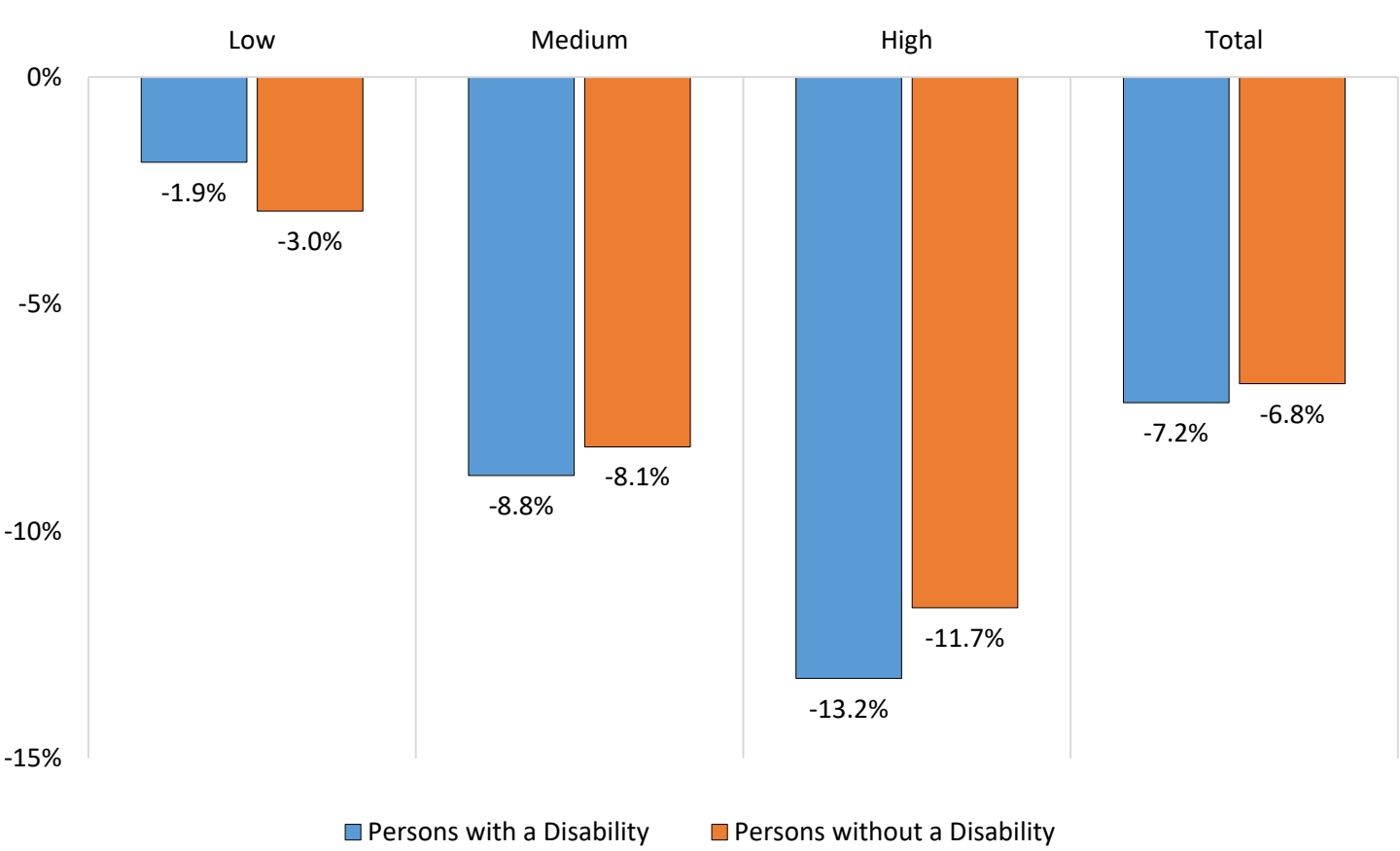
tasks to be performed in physical proximity to others,[9] and assigned numerical scores to the survey responses as 0, 25, 50, 75, and 100, from minimum to maximum physical proximity, respectively.

This analysis uses the Liebovici et al. numerical scores of the average physical proximity of occupations to assign workers in the CPS into one of three contact intensity categories: 1) low contact intensity if the average occupational physical proximity score is less than 50, 2) medium contact intensity if the average occupational physical proximity score is between 50 and 74, and 3) high contact intensity if the average occupational physical proximity score is 75 and above. In February 2020, approximately 29 percent of the workforce was employed in low contact intensity occupations, 49 percent in medium contact intensity, and 22 percent in high contact intensity. Examples of high contact intensity occupations include barbers/hairstylists, occupational/physical therapists, and home/personal care aides; examples of medium contact intensity include retail salespersons, cashiers, and cooks; and examples of low contact intensity occupations include software developers, chief executives, and accountants.

As shown in Figure 9, employment in low contact-intensity occupations fell by 1.9 percent for persons with disability and 3.0 percent for persons without disability, while employment in medium contact-intensity occupations declined by 8.8 percent for persons with disability and 8.1 percent for persons without disability, and employment in high contact-intensity occupations dropped by 13.2 percent for persons with disability and 11.7 percent for persons without disability. This pattern establishes that the impact of COVID-19 was lower in occupations where social distancing is easier, meaning that "contact intensity" is lower, and higher in occupations where social distancing is difficult, meaning that "contact intensity" is higher.

[9] Possible response options are: I don't work near other people (beyond 100 ft.), I work with others but not closely (e.g., private office), Slightly close (e.g., shared office), Moderately close (at arm's length), and Very close (near touching).

Figure 9. Change in Employment by Job "Contact intensity" and Disability Status: 2019 to 2020 (Population-Adjusted)



Notes: This chart presents findings from the Current Population Survey of the population-adjusted percentage change in employment from 2019 to 2020 for persons with and without a disability, *by the "contact intensity" in their occupation group* (where low contact intensity indicates greater ease of social distancing and high contact intensity indicates greater difficulty). Workers in an occupation group where the average occupational physical proximity score is above 75 are classified as "high contact intensity," workers in an occupation group where the average occupational proximity score between 50 and 74 percent are classified as "medium contact intensity," and workers in an occupation group where the average occupational proximity score is less than 50 are classified as "low contact intensity." Contact Intensity categories derived from Leibovici et al. (2020).

Conclusion

As the data presented in this brief indicate, there have been major changes in employment for persons both with and without a disability since February 2020. These changes vary substantially by disability status, occupation, and industry, and not all of the changes are expected. Further, employment trends have varied based on whether workers are in occupations with telework availability and by level of contact intensity. This brief will be updated as new data become available in order to observe potential changes in employment in the months ahead.

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About ODEP

The Office of Disability Employment Policy (ODEP) promotes policies and coordinates with employers and all levels of government to increase workplace success for people with disabilities. ODEP's mission is to develop and influence policies and practices that increase the number and quality of employment opportunities for people with disabilities. For more information please visit: https://www.dol.gov/agencies/odep.