



Maine's Labor Market During the Pandemic Impact on Telework

This article is the third published by the Center for Workforce Research and Information (CWRI) about Maine's labor market during the pandemic. It focuses on how the pandemic has impacted telework. The first article, available [here](#), examines job loss by sector and offers a comparison to the last recession. The second, available [here](#), focuses on the differing job impact by gender that has occurred.

Estimated Employment in Occupations Suited to Telework

Public safety measures, including the implementation of social distancing during the COVID-19 pandemic, led to drastic changes in the way that people perform their jobs. Among the most prominent changes has been the increased prevalence of telework. While some workers have or eventually will return to a work environment that is similar to before the pandemic, some may permanently incorporate telework. For some, telework may have been part of their work environment before the pandemic. Many others had never worked remotely before the pandemic.

For many occupations, telework is not possible. These include occupations in which goods or services are produced or delivered in person including in production, construction, installation and repair, direct-service healthcare, and food services related occupations.

Jonathan I. Dingel and Brent Neiman, economists at the University of Chicago Booth School of Business, used survey data to classify occupations that are suited to telework in their recent paper "How Many Jobs Can be Done at Home?". We merged these measures with Occupational Employment Statistics data and identified over 160,000 Maine jobs for which telework may be substituted for in-person work. These jobs appear in many areas of the labor market including management, business and financial, architecture and engineering, sales, office and administrative support, and education and training related occupations.

<i>Major Occupation Group</i>	<i>Employment Suited to Telework</i>	<i>High Wage Employment Suited to Telework</i>
11 Management	26,992	26,992
13 Business and Financial Operations	16,060	16,060
15 Computer and Mathematical	590	590
17 Architecture and Engineering	5,544	5,544
19 Life, Physical, and Social Science	1,963	1,963
21 Community and Social Service	2,175	2,175
23 Legal	3,380	3,380
25 Education, Training, and Library	26,830	24,280
27 Art, Design, Entertainment, Sports, and Media	5,644	3,534
29 Healthcare Practitioners and Technical	1,022	1,022
31 Healthcare Support	278	0
33 Protective Service	185	155
35 Food Preparation and Serving Related	0	0
37 Building and Grounds Cleaning and Maintenance	0	0
39 Personal Care and Service	5,010	0
41 Sales and Related	9,810	8,900
43 Office and Administrative Support	55,175	10,966
45 Farming, Fishing, and Forestry	45	45
47 Construction and Extraction	0	0
49 Installation, Maintenance, and Repair	30	0
51 Production	136	26
53 Transportation and Material Moving	0	0
Total	160,870	105,633

Source: Maine Department of Labor, Center for Workforce Research and Information, 2019 Occupational Employment Statistics. Classification of occupations for which telework is possible is from Jonathan I. Dingel and Brent Neiman, "How Many Jobs Can be Done at Home?", *Journal of Public Economics*, September 2020.

Many of the occupations identified are performed in an office environment and require higher levels of educational attainment or skills for entry. About two thirds of the jobs identified as suited to telework pay a wage above the 2019 median annual wage of \$38,370. Among the lower paying occupations in which telework is possible, most were found among office and administrative support and personal care occupations.

Other occupations are identified in which telework is possible though it may not be ideal. For example, in certain education and training functions telework may be possible through online learning, but may not be ideal for students, parents, and teachers.

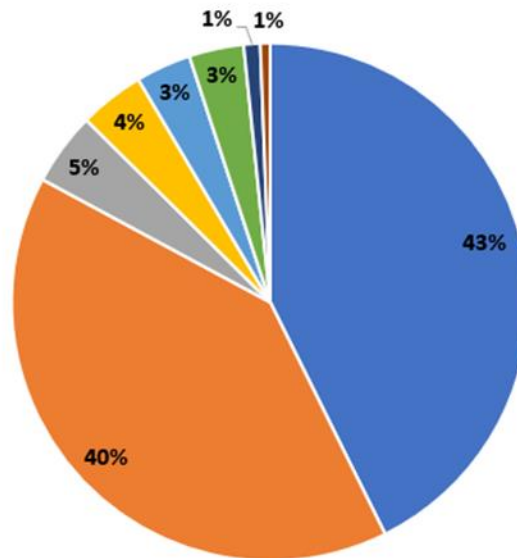
Telework is not possible for many occupations. No jobs were identified as suited to telework in the construction and extraction, food service, buildings and grounds cleaning, and maintenance and transportation occupations. The overwhelming majority of jobs in protective service,

installation maintenance and repair, and farming fishing and forestry occupations were identified as not suited to telework.

Among the jobs identified as suited to telework, about 59 percent typically require educational attainment beyond a high school diploma for entry. About 51 percent require a Bachelor’s degree or higher level of educational attainment. Among the occupations suited to telework requiring a high school diploma or lower level of educational attainment, most were identified in office and administrative support occupations including customer service representatives, office clerks, secretaries and administrative assistants and bookkeeping and accounting clerks.

Employment Suited to Telework by Typical Education Needed for Entry

- Bachelor's degree
- Some college, no degree
- Master's degree
- No formal educational credential
- High school diploma or equivalent
- Doctoral or professional degree
- Associate's degree
- Postsecondary non-degree award



Source: Typical education needed for entry for detailed occupations data comes from the U.S. Bureau of Labor Statistics Occupational Projections, education and training assignments by detailed occupation

Results from Business Response Survey

Between July and September of 2020, the U.S. Bureau of Labor Statistics conducted a national survey of businesses to better understand how they were impacted by the pandemic. About 27 percent of businesses in Maine reported that they increased telework during the pandemic. These businesses accounted for 263,000 jobs in Maine. (Businesses that increased telework did not necessarily offer telework arrangements to all of their employees.) The percentage of businesses that increased telework was similar, but slightly below the national average of 31 percent. An additional 17 percent of businesses reported having some telework arrangements already in place before the pandemic. The majority of Maine businesses, 57 percent, reported having no telework arrangements either before or during the pandemic.

Table 2a: Private sector establishments that increased telework				
Area	Percentage of establishments	Number of establishments	Percentage of employment in establishments	Employment in establishments
U.S.	30.9%	2,611,007	54.3%	68,550,503
Maine	27.1%	12,003	50.5%	263,059
Table 2b: Private Sector Establishments that had no change in existing telework arrangements				
U.S.	17.6%	1,489,250	9.8%	12,400,849
Maine	16.8%	7,468	10.6%	55,067
Table 2c: Private sector establishments that had no telework at this location both before and after the coronavirus pandemic				
U.S.	52.3%	4,417,171	36.9%	46,555,019
Maine	56.7%	25,148	39.3%	204,717

Source: U.S. Bureau of Labor Statistics Business Response Survey, State Table 14

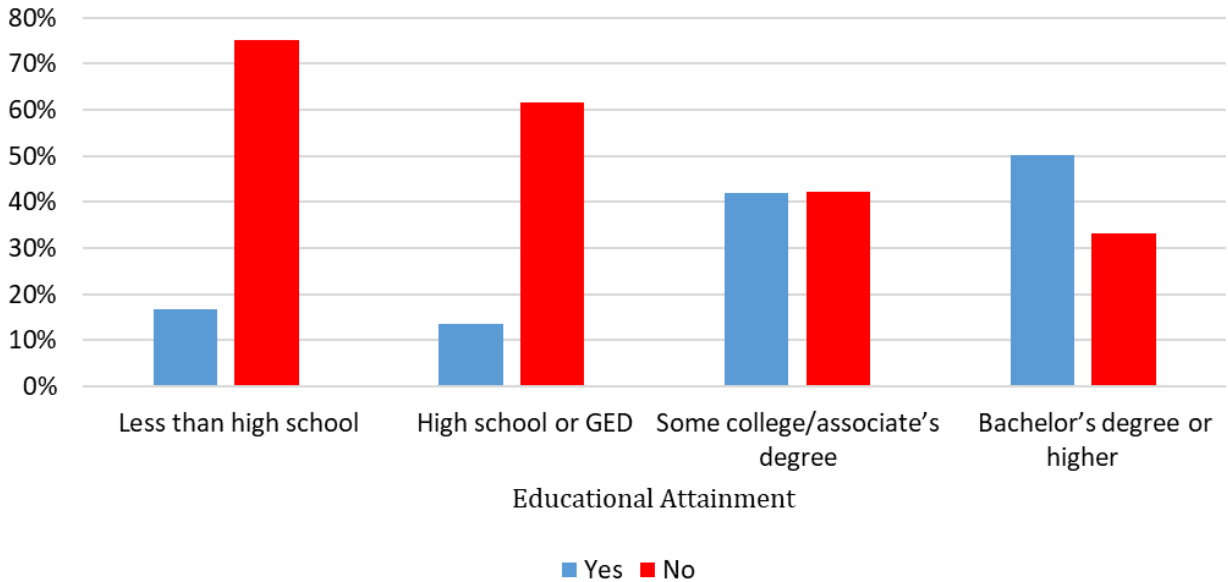
Notes: These data were collected from July 20 through September 30, 2020. U.S. BLS notes: The reference period for the survey was from January 1, 2020 (before the pandemic) through the date that the survey was completed. The data were collected from private-sector establishments only; government establishments were not surveyed. As a result, the estimates of establishments and employment refer to private-sector establishments and employment.

Results from Household Pulse Survey

The U.S. Census Bureau implemented a new experimental pulse survey to quickly collect information about the impact of the pandemic on households. Data collected between February 17 and March 1, 2021 shows that 34 percent of households in Maine reported at least one adult that had substituted some or all of their in-person work for telework. This rate was similar to the national average of 36 percent. This data points to a dramatic change in work environments that persists one year into the pandemic, with one-third of households with an adult working in a different work location, usually their home.

Workers with higher levels of educational attainment were substantially more likely to substitute telework for in person work. Half of all workers with a Bachelor's degree or higher reported teleworking. Less than 15 percent of workers with a high school diploma, GED or lower level of educational attainment reported teleworking.

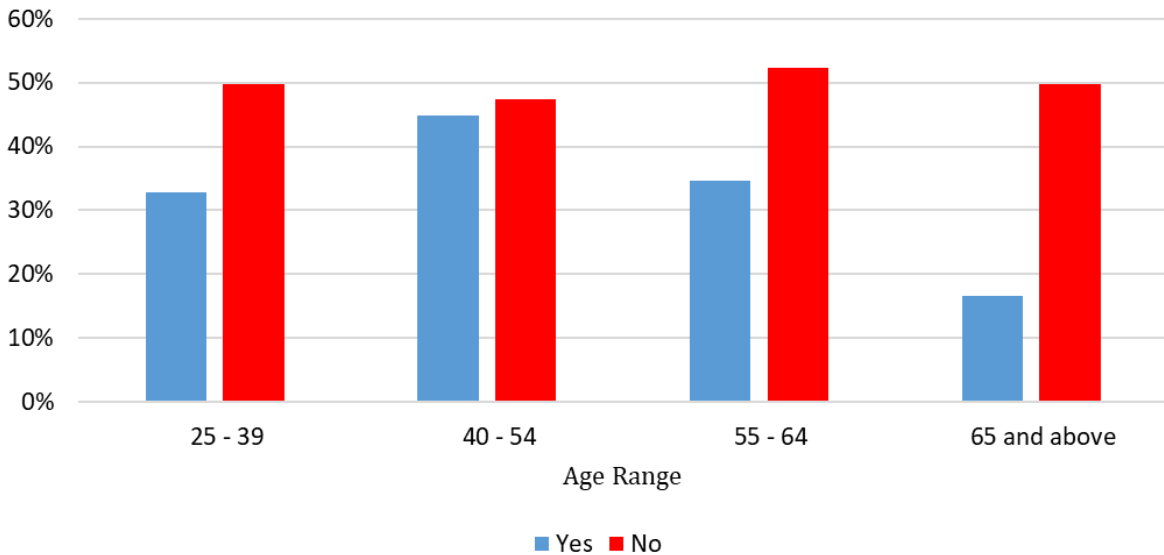
Percentage of adults who substituted some/all in-person work for telework by education level



Source: U.S. Census Bureau Household Pulse Survey, Week 25. Data collected from February 17 through March 1, 2021. Note: Percentage Yes and No columns will not sum to 100% due to households that did not report the information.

Workers between the ages of 40-54 were the most likely to telework and those age 65 and above were the least likely.

Percentage of adults who substituted some/all in-person work for telework by age



Source: U.S. Census Bureau Household Pulse Survey, Week 25. Data collected from February 17 through March 1, 2021. Note: Percentage Yes and No columns will not sum to 100% due to households that did not report the information.

These data sources, taken together, point to the number of workers still working remotely, the types of occupations suited to telework and the characteristics of the workers in those occupations. Many workers in these occupations were insulated from job losses in 2020 because their work arrangements were adaptable during the pandemic.

All CWRI publications and presentations can be found [here](#). Future topics include: job impact by educational attainment, reemployment and the challenge the pandemic has made for data collection and estimation.