Understanding the Post-COVID Disability Employment Surge: Real or Compositional Change?

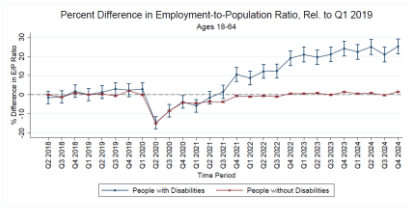
Ari Ne'eman **Nicole Maestas**

Harvard T.H. Chan School of Public Health & Harvard Medical School

May 13, 2025

1

Disability Employment During COVID-19

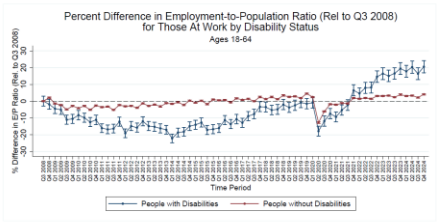


Adapted from Ne'eman & Maestas (2023a)

2

2

Disability Employment from Q3 2008-Q4 2024

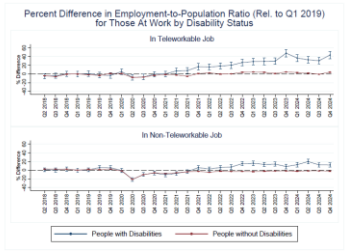


Adapted from Ne'eman & Maestas (2023a)

3

3

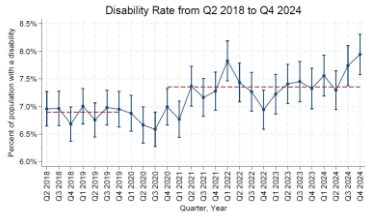
COVID-era Disability Employment Gains Strongest in Teleworkable Occupations



4

4

Disability Rates - Overall



5

5

Disability Rates – By Type

6

6

Prior Work on the COVID Disability Employment Surge

- Ne'eman & Maestas (2022) use the CPS to show the surge in disabled employment and Labor Force Participation (LFP) in 2022, but note a corresponding increase in disability rates.
- Sheiner & Salwati (2022) use the CPS to argue that disability employment improvements are primarily the result of compositional change as employment growth largest among cognitively disabled (who also see largest disability increase).
- Guo & Krolikowski (2024) use the longitudinal component of the CPS to show that 55% of the increase in disabled LFP 2021-22 is from switching into disability rather than switching into employment.

7

7

Prior Work on Telework's Role

- Ne'eman & Maestas (2022) use the CPS to show that the increase in disabled employment is strongest in teleworkable occupations.
- Liu & Quinby (2024) use the HRS to show that increased employment among older workers with disabilities is entirely in teleworkable occupations.
- Bloom, Dahl & Rooth (2024) use the CPS and ACS to show that a 1 percentage point increase in telework increases full-time employment by 1.1% for people with non-cognitive disabilities, explaining 80% of the disability employment surge for this group.
  - To deal with compositional change, they exclude cognitive disability from their analysis.

8

8

Decomposition Analysis

- Regression relies on βs and Xs: the coefficients indicating the returns of a variable and the "endowments" indicating the level of that variable
- Decomposition analysis calculates how much of the difference between two groups can be explained by differences in endowments
- We use a Fairlie regression - a variant on the popular Kitagawa-Oaxaca-Blinder designed for logit regression
- Data comes from Current Population Survey respondents who indicate a disability in Wave 5 in 2019 or 2023 (n=13,605, 46% in 2019 and 54% in 2023)

9

9

Decomposition Analysis (cont)

- We use coefficients from a pooled regression of all time periods, showing how subtracting the endowment levels of time t from time t+1 impacts the difference in outcomes assuming common coefficients.
- We test for compositional change in new disability, each of the 6 disability types, age, educational attainment, race/ethnicity, children, veteran status, citizenship, nativity, marriage, sex, state of residence, and calendar month.
- Test both a combined approach and one dis-aggregated by cognitive disability status.

10

10

Disability Recency: Exploiting the Longitudinal Nature of the CPS

Table: Ongoing Disabled

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Month in Sample	1	2	3	4									5	6	7	8
6 Disability Questions	Y												Y			

Respondent indicates having a disability in the first and second administrations of the disability questions.

Table: Newly Disabled

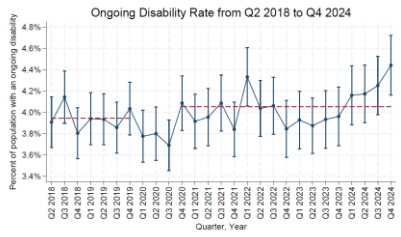
Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Month in Sample	1	2	3	4									5	6	7	8
6 Disability Questions	N												Y			

Respondent did not indicate having a disability in the first administration of the disability questions but did indicate having a disability in the second administration.

11

11

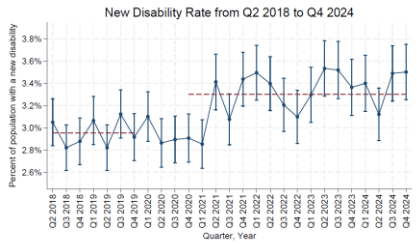
Disability Rates - Ongoing Disabled



12/19

12

Disability Rates - Newly Disabled



13

13

Descriptive Statistics (1)

	All Disabled	Ongoing Disabled	Newly Disabled
Proportion of sample (%)	100.0%	59.9%	40.1%
Employment/Benefit Participation			
Avg. employment rate (%)	26.7%	19.0%	38.1%
Avg. SSI rate (%)	18.2 %	23.2%	10.6%
Avg. SSDI rate (%)	27.0%	35.2%	14.8%

From Ne'eman & Maestas (2023b)

14

14

Descriptive Statistics (2)

	All Disabled	Ongoing Disabled	Newly Disabled
Proportion of sample (%)	100.0%	59.9%	40.1%
Employment/Benefit Participation			
Avg. employment rate (%)	26.7%	19.0%	38.1%
Avg. SSI rate (%)	18.2 %	23.2%	10.6%
Avg. SSDI rate (%)	27.0%	35.2%	14.8%

From Ne'eman & Maestas (2023b)

15

15

Descriptive Statistics (3)

	All Disabled	Ongoing Disabled	Newly Disabled
Proportion of sample (%)	100.0%	59.9%	40.1%
Employment/Benefit Participation			
Avg. employment rate (%)	26.7%	19.0%	38.1%
Avg. SSI rate (%)	18.2 %	23.2%	10.6%
Avg. SSDI rate (%)	27.0%	35.2%	14.8%

From Ne'eman & Maestas (2023b)

16

16

Decomposition Results (1)

Comparing 2019 to 2024	
2024 Disability Employment	0.3440
2019 Disability Employment	0.2776
Difference	0.0664
Total Explained	0.0270
Total Difference Explained (%)	40.62%
Independent Variables	*% Explained by Each*
Physical Disability	16.33%***
Age 18-34	11.49%***
BA+	10.40%***
Mobility Disability	4.35%***
New Disability	3.23%***
State	2.30%***
Some College	2.21%***
Personal Care Disability	1.53%***
Age 35-49	0.85%***
Vision Disability	0.75%***
Hispanic	0.50%
Veteran	0.01%
Citizen	-0.00%
Native Born	-0.06%
Months	-0.07%
Male	-0.10%
Black	-0.14%
Married	-0.57%***
Children	-1.27%***
White	-1.36%***
Hearing Disability	-1.51%***
Cognitive Disability	-7.83%***

17

17

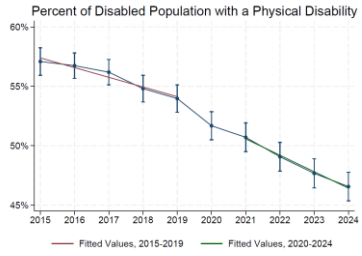
Decomposition Results (2)

Comparing 2019 to 2024	
2024 Disability Employment	0.3440
2019 Disability Employment	0.2776
Difference	0.0664
Total Explained	0.0270
Total Difference Explained (%)	40.62%
Independent Variables	*% Explained by Each*
Physical Disability	16.33%***
Age 18-34	11.49%***
BA+	10.40%***
Mobility Disability	4.35%***
New Disability	3.23%***
State	2.30%***
Some College	2.21%***
Personal Care Disability	1.53%***
Age 35-49	0.85%***
Vision Disability	0.75%***
Hispanic	0.50%
Veteran	0.01%
Citizen	-0.00%
Native Born	-0.06%
Months	-0.07%
Male	-0.10%
Black	-0.14%
Married	-0.57%***
Children	-1.27%***
White	-1.36%***
Hearing Disability	-1.51%***
Cognitive Disability	-7.83%***

18

18

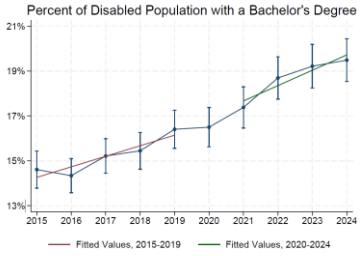
Physical Disability Trends, 2015-2024



19

19

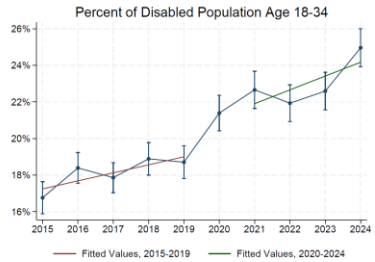
BA+ Trends, 2015-2024



20

20

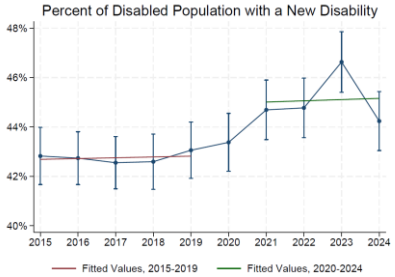
Age 18-34 Trends, 2015-2024



21

21

New Disability Trends, 2015-2024



22

22

Decomposition Results - By Cognitive Disability Status

Comparing 2019 to 2024	With Cognitive Disability	Without Cognitive Disability
2024 Disability Employment	0.3095	0.3715
2019 Disability Employment	0.2118	0.3212
Difference	0.0976	0.0503
Total Explained	0.0495	0.0207
Total Difference Explained (%)	50.68%	41.14%
Physical Disability	4.72%***	24.15%***
Age 18-34	13.35%***	6.12%***
BA+	13.02%***	5.58%***
Mobility Disability	9.04%***	-0.35%
New Disability	1.38%***	6.67%***
State	2.46%***	0.99%
Some College	3.03%***	1.62%***
Personal Care Disability	2.78%***	0.18%
Age 35-49	2.14%***	-0.40%*
Vision Disability	0.06%	-0.61%
Hispanic	0.03%	2.63%**
Veteran	-0.04%	0.11%
Citizen	0.20%	0.07%
Native Born	-0.62%	-0.08%
Months	-0.12%	-0.34%
Male	-0.30%	1.55%***
Black	0.17%	-0.43%
Married	-0.05%	-0.65%**
Children	-0.23%	-1.78%***
White	-0.07%	-3.30%***
Hearing Disability	-0.31%*	-0.84%***

23

23

2019-2024 Compared to Pre-COVID Decompositions, By Cognitive Disability (1)

With Cognitive Disability			
Variable	**2019–2024**	**2014–2019**	**2013–2018**
Difference	0.0976	0.0285	0.0295
Total Explained	0.0495	0.0055	0.0042
Total Difference Explained (%)	50.68%	19.27%	14.06%
Physical Disability	4.72%***	11.93%***	0.97%
BA+	13.02%***	18.33%***	7.46%***
Age 18–34	13.35%***	-0.04%	5.78%***
New Disability	1.38%***	7.21%***	-1.70%
Without Cognitive Disability			
Variable	**2019–2024**	**2014–2019**	**2013–2018**
Difference	0.0503	0.0497	0.0121
Total Explained	0.0207	0.0167	0.0106
Total Difference Explained (%)	41.14%	33.56%	88.25%
Physical Disability	24.15%***	18.71%***	46.88%***
BA+	5.58%***	11.00%***	10.65%***
Age 18–34	6.12%***	0.55%**	4.19%***
New Disability	6.67%***	3.29%***	27.86%***

24

24

2019-2024 Compared to Pre-COVID Decompositions, By Cognitive Disability (2)

With Cognitive Disability			
Variable	**2019–2024**	**2014–2019**	**2013–2018**
Difference	0.0976	0.0285	0.0295
Total Explained	0.0495	0.0055	0.0042
Total Difference Explained (%)	50.68%	19.27%	14.06%
Physical Disability	4.72%***	11.93%***	0.97%
BA+	13.02%***	18.33%***	7.46%***
Age 18–34	13.35%***	-0.04%	5.78%***
New Disability	1.38%***	7.21%***	-1.70%
Without Cognitive Disability			
Variable	**2019–2024**	**2014–2019**	**2013–2018**
Difference	0.0503	0.0497	0.0121
Total Explained	0.0207	0.0167	0.0106
Total Difference Explained (%)	41.14%	33.56%	88.25%
Physical Disability	24.15%***	18.71%***	46.88%***
BA+	5.58%***	11.00%***	10.65%***
Age 18–34	6.12%***	0.55%**	4.19%***
New Disability	6.67%***	3.29%***	27.86%***

25

25

2019-2024 Compared to Pre-COVID Decompositions, By Cognitive Disability (3)

With Cognitive Disability			
Variable	**2019–2024**	**2014–2019**	**2013–2018**
Difference	0.0976	0.0285	0.0295
Total Explained	0.0495	0.0055	0.0042
Total Difference Explained (%)	50.68%	19.27%	14.06%
Physical Disability	4.72%***	11.93%***	0.97%
BA+	13.02%***	18.33%***	7.46%***
Age 18–34	13.35%***	-0.04%	5.78%***
New Disability	1.38%***	7.21%***	-1.70%
Without Cognitive Disability			
Variable	**2019–2024**	**2014–2019**	**2013–2018**
Difference	0.0503	0.0497	0.0121
Total Explained	0.0207	0.0167	0.0106
Total Difference Explained (%)	41.14%	33.56%	88.25%
Physical Disability	24.15%***	18.71%***	46.88%***
BA+	5.58%***	11.00%***	10.65%***
Age 18–34	6.12%***	0.55%**	4.19%***
New Disability	6.67%***	3.29%***	27.86%***

26

26

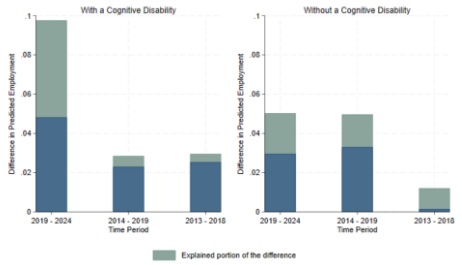
2019-2024 Compared to Pre-COVID Decompositions, By Cognitive Disability (4)

With Cognitive Disability			
Variable	**2019–2024**	**2014–2019**	**2013–2018**
Difference	0.0976	0.0285	0.0295
Total Explained	0.0495	0.0055	0.0042
Total Difference Explained (%)	50.68%	19.27%	14.06%
Physical Disability	4.72%***	11.93%***	0.97%
BA+	13.02%***	18.33%***	7.46%***
Age 18–34	13.35%***	-0.04%	5.78%***
New Disability	1.38%***	7.21%***	-1.70%
Without Cognitive Disability			
Variable	**2019–2024**	**2014–2019**	**2013–2018**
Difference	0.0503	0.0497	0.0121
Total Explained	0.0207	0.0167	0.0106
Total Difference Explained (%)	41.14%	33.56%	88.25%
Physical Disability	24.15%***	18.71%***	46.88%***
BA+	5.58%***	11.00%***	10.65%***
Age 18–34	6.12%***	0.55%**	4.19%***
New Disability	6.67%***	3.29%***	27.86%***

27

27

2019-2024 Compared to Pre-COVID Decompositions, By Cognitive Disability (5)



28

28

Key Takeaways

- Compositional change is associated with approximately half of the disability employment increase during COVID - but much of it comes from pre-COVID trends.
- Compared to prior periods, novel compositional change seems most influential to employment increases among persons with cognitive disabilities.
- In contrast, persons without cognitive disabilities have both employment post-COVID employment growth and compositional shifts consistent with the pre-COVID 2014-19, suggesting a return to pre-COVID employment growth (though telework may represent a new driver).

29

29

Questions?

30