



Where did all the workers go?

Using QWI-Based Employment to Population Ratios to
Understand Post-Pandemic Employment Recovery

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Lower Labor Force Participation Rates for Three of Seven Age Groups

Table 3: Minnesota Population, Labor Force, and Labor Force Participation Rate (LFPR) for Seven Age Groups, 2019 and 2023

Population group	2019			2023*			Change 2019-2023		
	Population	Labor Force	LFPR	Population	Labor Force	LFPR	Population	Labor Force	LFPR
Total, age 16+	4,424,000	3,100,000	70.1	4,541,000	3,101,000	68.3	+117,000	1,000	-1.8
16 to 19 years	300,000	144,000	48.0	291,000	179,000	61.5	-9,000	+35,000	+13.5
20 to 24 years	354,000	293,000	82.6	355,000	280,000	78.7	+1,000	-13,000	-3.9
25 to 34 years	787,000	691,000	87.7	742,000	656,000	88.4	-45,000	-35,000	+0.7
35 to 44 years	670,000	592,000	88.3	774,000	700,000	90.4	+104,000	+108,000	+2.1
45 to 54 years	695,000	615,000	88.4	651,000	577,000	88.6	-44,000	-38,000	+0.2
55 to 64 years	756,000	557,000	73.6	693,000	488,000	70.4	-63,000	-69,000	-3.2
65 years +	861,000	209,000	24.3	1,035,000	223,000	21.5	+174,000	+14,000	-2.8

← Largest LFPR decline

← Second Largest

← Least

Source: U.S. Bureau of Labor Statistics, Local Area Unemployment Statistics, Expanded State Employment Status Demographic Data from the [Current Population Survey](#), Accessed January 29, 2024

Childcare and Eldercare Knocked Down by Pandemic

“... since the pandemic began, and especially in the last couple of years, the decline of [family child care] providers has accelerated while the growth in [child care center] providers has slowed.”

- Minneapolis Federal Reserve Bank, May 2023

“... the total number of child care businesses is still in decline, and so is the number of children these businesses can care for.”

- Minneapolis Fed, October 2023

"the single most important fact about full-time caregivers is that they're primarily women.”

- Minneapolis Fed, July 2023

Employment in Nursing & Residential Care decreased by over 8,000 (-7.4%). Who is caring for the elderly these employees had cared for?

Figure 3: Minnesota Nursing & Residential Care Facilities Employment, First Quarter 2019 to First Quarter 2023



CERP: Covered Employment to Resident Population

- If the decline in LFPR was due to caregiving, we would see much higher declines for females than males in these age groups.
- LFPR is estimated from the CPS
 - Sample designed to estimate unemployment (about 900 per month in MN)
- Sampling error is too large get reliable LFPR comparisons for age groups by sex. Differences overlap considering the margin of error.
- Divide QWI Employment by age and sex by Census Population Estimates by age and sex for an Employment to Population Ratio → CERP
 - Employment to Population Ratio is LFPR excluding unemployed
- QWI from State UI records and Census demographics – has no sampling error
 - “Covered” – Excludes self employment
 - “Resident” – Population based on residence while Employment based on work location

Drastically Lower CERP for Females in Two Age Groups

Table 6: Change in Minnesota Covered Employment to Resident Population Ratio (CERP) by Sex for Selected Age Groups

	Year to First Quarter (Yt1Q) 2020 Jobs*	2020 Resident Population**	Yt1Q 2020 CERP*	Yt1Q 2023 Jobs*	2022 Resident Population**	Yt1Q 2023 CERP*	CERP Change Yt1Q 2020 to Yt1Q 2023*
Age 19 to 24							
Female	156,320	215,987	72.4	146,099	216,879	67.4	-5.0
Male	140,574	223,184	63.0	134,417	224,590	59.8	-3.1
Age 55 to 64							
Female	263,772	379,233	69.6	248,826	367,438	67.7	-1.8
Male	247,813	383,546	64.6	237,899	371,122	64.1	-0.5

*Based on average employment for the four quarters to the beginning of first quarter of 2020 (Yt1Q 2020) and Yr1Q 2023.

** Population estimates used are for April 2020 and July 2022.

Employment to Population ratio (EP) is percent of population employed.

Age 19 to 24: Why did Female CERP decline 1.6x more than males?

Age 55 to 64: Why did Female CERP decline 3.6x more?

CERP by age and sex quantitatively demonstrated the workforce impact of caregiving

Age	Sex	CERP Change, Yt1Q2020 to Yt1Q2023
14 to 18	Female	3.3%
	Male	2.8%
19 to 24	Female	-5.0%
	Male	-3.1%
25 to 34	Female	-3.1%
	Male	-3.6%
35 to 44	Female	-1.0%
	Male	-1.6%
45 to 54	Female	0.2%
	Male	-0.1%
55 to 64	Female	-1.8%
	Male	-0.5%
65 and over	Female	0.1%
	Male	0.1%
Total 14 and over	Female	-1.8%
	Male	-1.6%

Greater increase than males

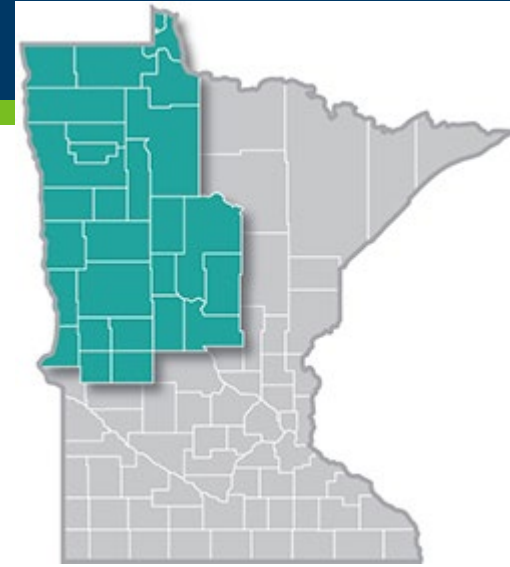
Less decline than males

Less decline than males

Increase while males decline

Same as males

CERP is Available to Inform Local Workforce Development Board (WDB) Strategy



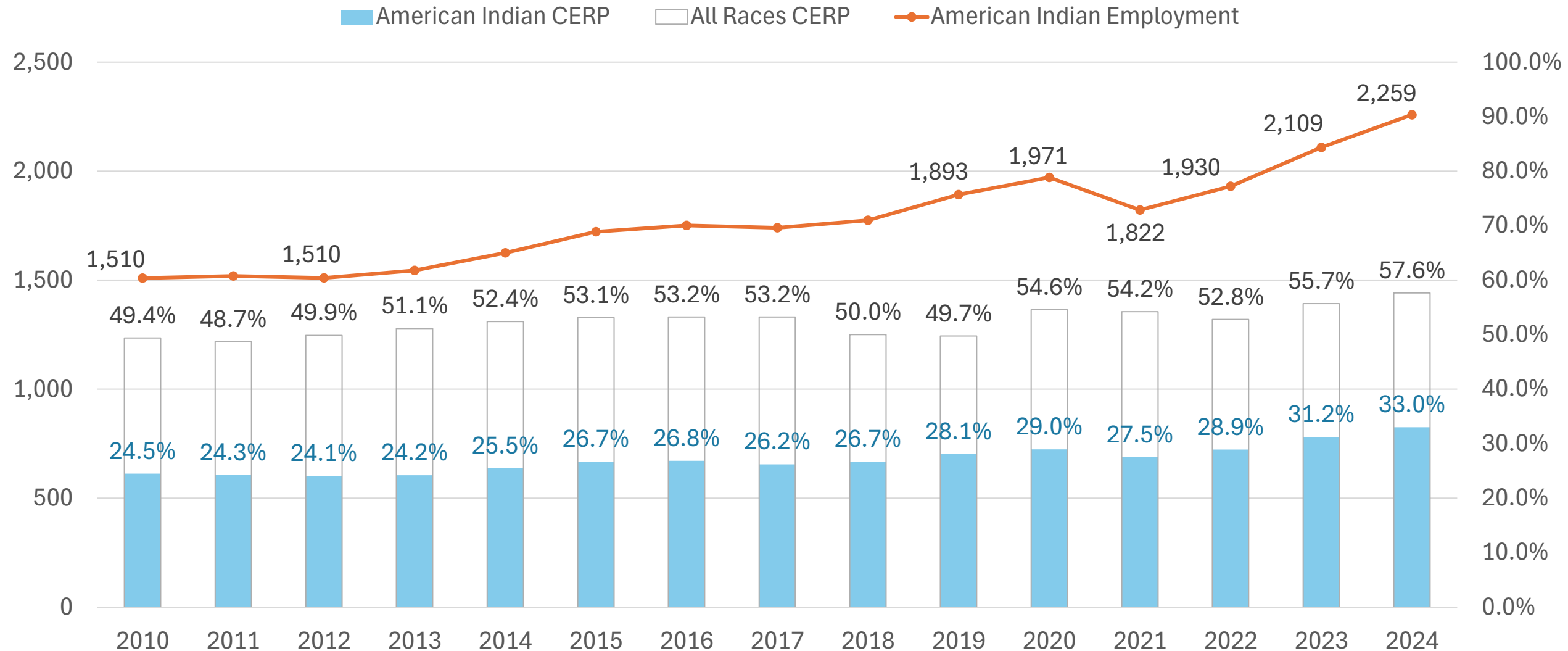
Age	Sex	Yt1Q 2020 Jobs	Yt1Q 2024 Jobs	Change		CERP Change Yt1Q 2020 to Yt1Q 2024
				Jobs	Percent	
14 to 18	Female	5,533	7,077	1,544	27.9%	6.4%
	Male	4,619	5,721	1,102	23.8%	4.1%
19 to 21	Female	6,560	6,517	-43	-0.7%	-2.0%
	Male	5,807	5,837	30	0.5%	-1.7%
22 to 24	Female	6,243	5,918	-325	-5.2%	-3.0%
	Male	6,097	5,973	-124	-2.0%	-2.2%
25 to 34	Female	21,998	20,667	-1,331	-6.1%	-3.5%
	Male	21,591	21,285	-305	-1.4%	0.0%
35 to 44	Female	23,821	24,448	627	2.6%	-1.5%
	Male	21,848	23,423	1,575	7.2%	1.8%
45 to 54	Female	22,314	21,854	-459	-2.1%	-1.0%
	Male	19,033	19,599	566	3.0%	1.8%
55 to 64	Female	24,019	21,542	-2,477	-10.3%	-2.6%
	Male	19,534	18,839	-695	-3.6%	1.2%
65 and over	Female	8,409	9,612	1,203	14.3%	0.7%
	Male	8,421	9,589	1,168	13.9%	0.6%
Total 14 and over	Female	118,895	117,634	-1,261	-1.1%	-1.6%
	Male	106,949	110,266	3,317	3.1%	0.4%

Population increased, and more for males.

Millennials age 24 to 39 in 2020 are a large cohort in the population. Many aged to the 35 to 44 group.

CERP increased slightly for 65+, but many Baby Boomers aging into this group.

American Indian Employment and CERP Trend in Beltrami County, MN



Summary and Conclusions

- CERP is QWI Employment/Census Population Estimate, providing an employment to population ratio by age, sex, race, and ethnicity for state, LWDB area, and county.
- At the state level, CERP overcomes sampling error of CPS based LFPR estimates to gain insights on workforce participation of subgroups
 - CERP showed that from the COVID-19 pandemic to 2023 in Minnesota the age 19 to 24 and 55 to 64 groups LFPR decline was mostly from females leaving the workforce, indicating the continued impact of caregiving on the workforce.
- At the LWDB level, CERP provides the only quarterly workforce participation data.
 - Showed decline in female workforce participation through 2023 for every group except oldest and youngest, in contrast to statewide.
- At the county level, CERP reveals the persistent gap in American Indian workforce participation compared to All Races, even with impressive gains since the pandemic.