

The effects of seasonality on data



LMI Tuesdays

June 4, 2024

Jamie Vaughn

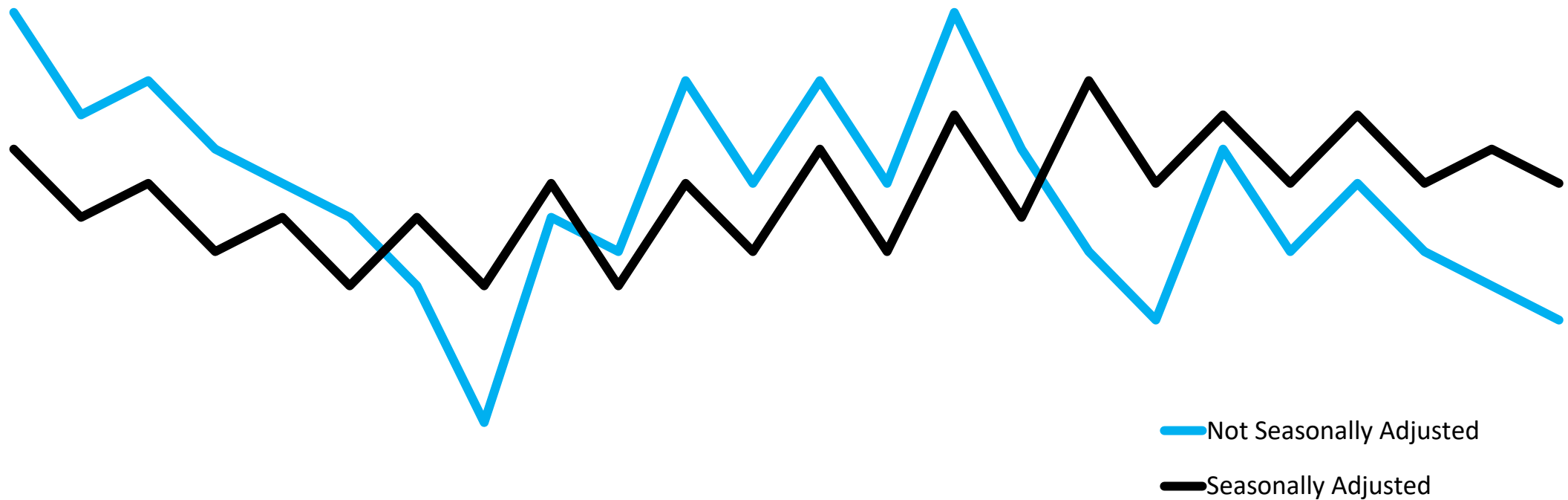
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What is seasonality?

- Predictable changes that occur in a business or economy over the course of a year based on the seasons.
- Can cause fluctuations in employment and unemployment levels, as well as the size of the labor force.
 - Changes in weather
 - School Schedules
 - Holidays

What does seasonality look like?



Seasonally Adjusted vs. Not Seasonally Adjusted

- Can you compare all time periods?
 - Yes, if it is Seasonally Adjusted Data
- Available at the state level on two BLS products:
 - Local Area Unemployment Statistics (LAUS)
 - Current Employment Statistics (CES)

Type:

Not Seasonally Adjusted

Seasonally Adjusted

How do I know if the data is seasonally adjusted?

NC TODAY | » April 2024 Data

UNEMPLOYMENT RATE COMPARISON

North Carolina

3.5%

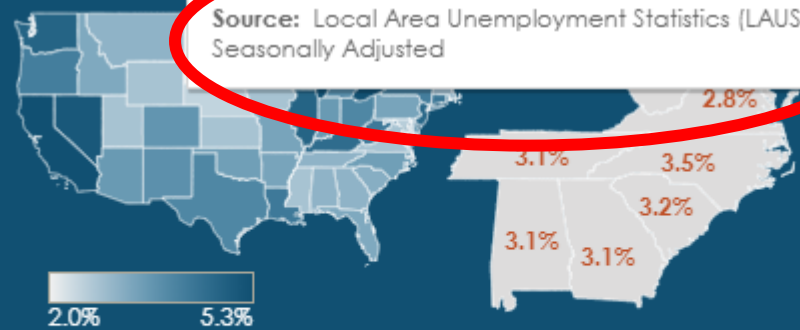
3.5% LAST MONTH

United States

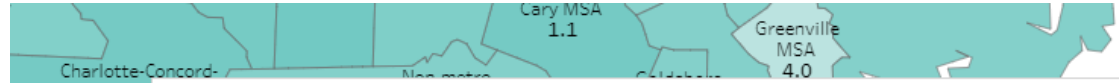
3.9%

North Carolina
April 2024

Source: Local Area Unemployment Statistics (LAUS),
Seasonally Adjusted



KEY INDICATORS



This map provides information about labor market tightness in North Carolina's sub-state regions. This map depicts aggregate labor market conditions; data on particular occupations are not available on this map.

This map can be used to compare labor market conditions between regions. A low number of jobseekers per job opening indicates a "tight" labor market, while a high number of jobseekers per job opening indicates a "slack" labor market. A tight labor market presents opportunities for jobseekers but can lead to challenges for employers looking to hire.

Monthly data are seasonally adjusted and smoothed. Annual data are annual averages of unadjusted monthly data. Current and historical data are updated and revised on a monthly basis.

Technical details about methodology can be found on the "Methodology" tab.

Data sources:

- Labor supply: LEAD analysis of data from the U.S. Bureau of Labor Statistics (Local Area Unemployment Statistics)
- Labor demand: LEAD analysis of data from the Conference Board® and the U.S. Bureau of Labor Statistics

About this table

See all data

How seasonality affects employment

QCEW

How has Asheville MSA Quarterly Employment Grown from 2017 – 2022?

	Qtr – Year	Average Employment
Q1 2017		
Q4 2022		

Must compare apples to apples

Source: Quarterly Census of Employment and Wages (QCEW), 2017 - 2022

How seasonality affects employment

QCEW

How has Asheville MSA Quarterly Employment Grown from 2017 – 2022?

Qtr – Year	Average Employment
Q4 2017	191,518
Q4 2022	201,319

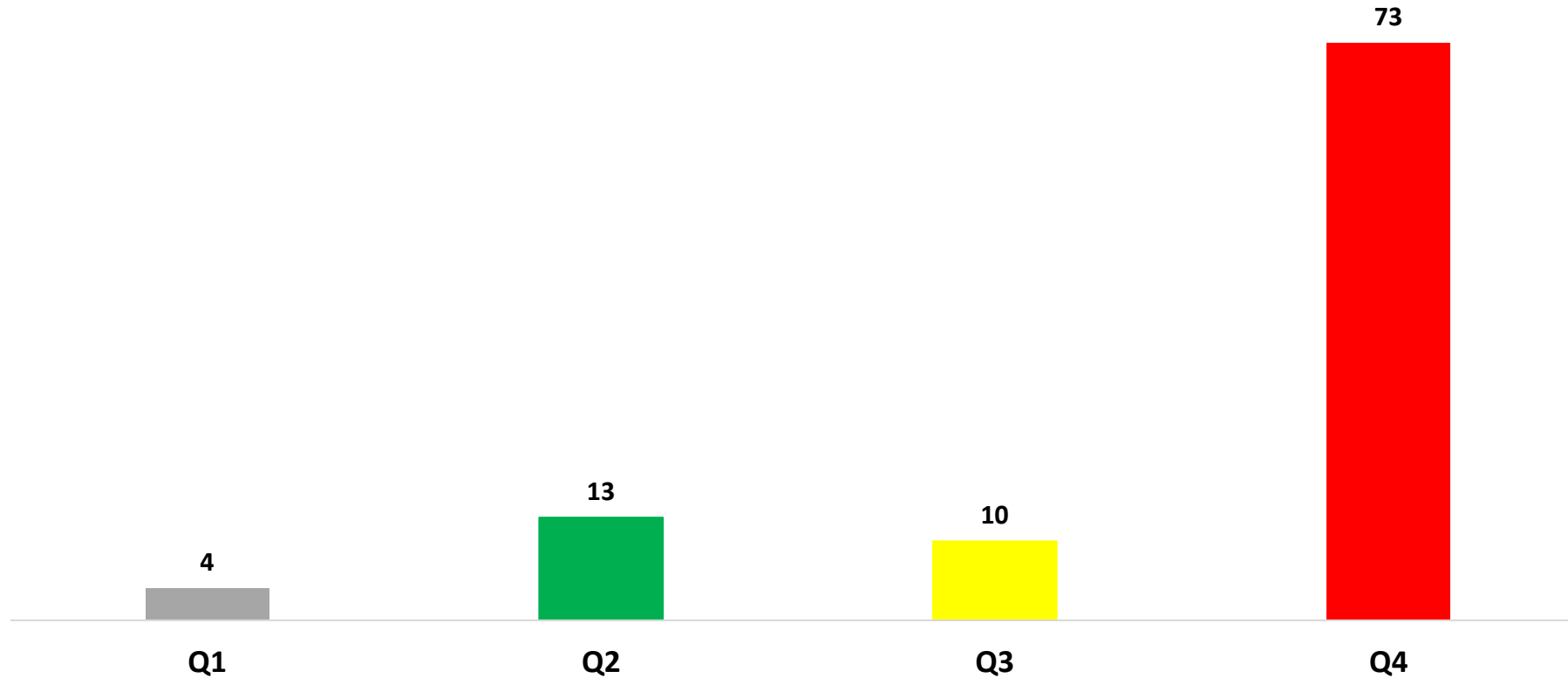
Growth of 9,801 jobs (5.1% Increase)

Year	Average Employment
2017 Annual	188,201
2022 Annual	198,155

Growth of 9,954 jobs (5.3% Increase)

Source: Quarterly Census of Employment and Wages (QCEW), 2017 - 2022

What is the largest quarter for employment in 2022?



Source: Quarterly Census of Employment and Wages (QCEW), 2022

Largest Employment by Quarter, 2022

Quarter 1	Quarter 2	Quarter 3
<p>Beaufort County Edgecombe County Gates County Stokes County</p>	<p>Alexander County Ashe County Carteret County Davie County Graham County Madison County McDowell County Northampton County Randolph County Rutherford County Warren County Washington County Yadkin County</p>	<p>Avery County Brunswick County Currituck County Dare County Henderson County Hyde County Pamlico County Rowan County Swain County Transylvania County</p>

Source: Quarterly Census of Employment and Wages (QCEW), 2022



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Summer Recruitment Blitz

The NCDOR is recruiting for a number of openings throughout the agency, including the Revenue Officer I, Revenue Tax Auditor I, and Revenue Field Auditor I positions.

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Pause |

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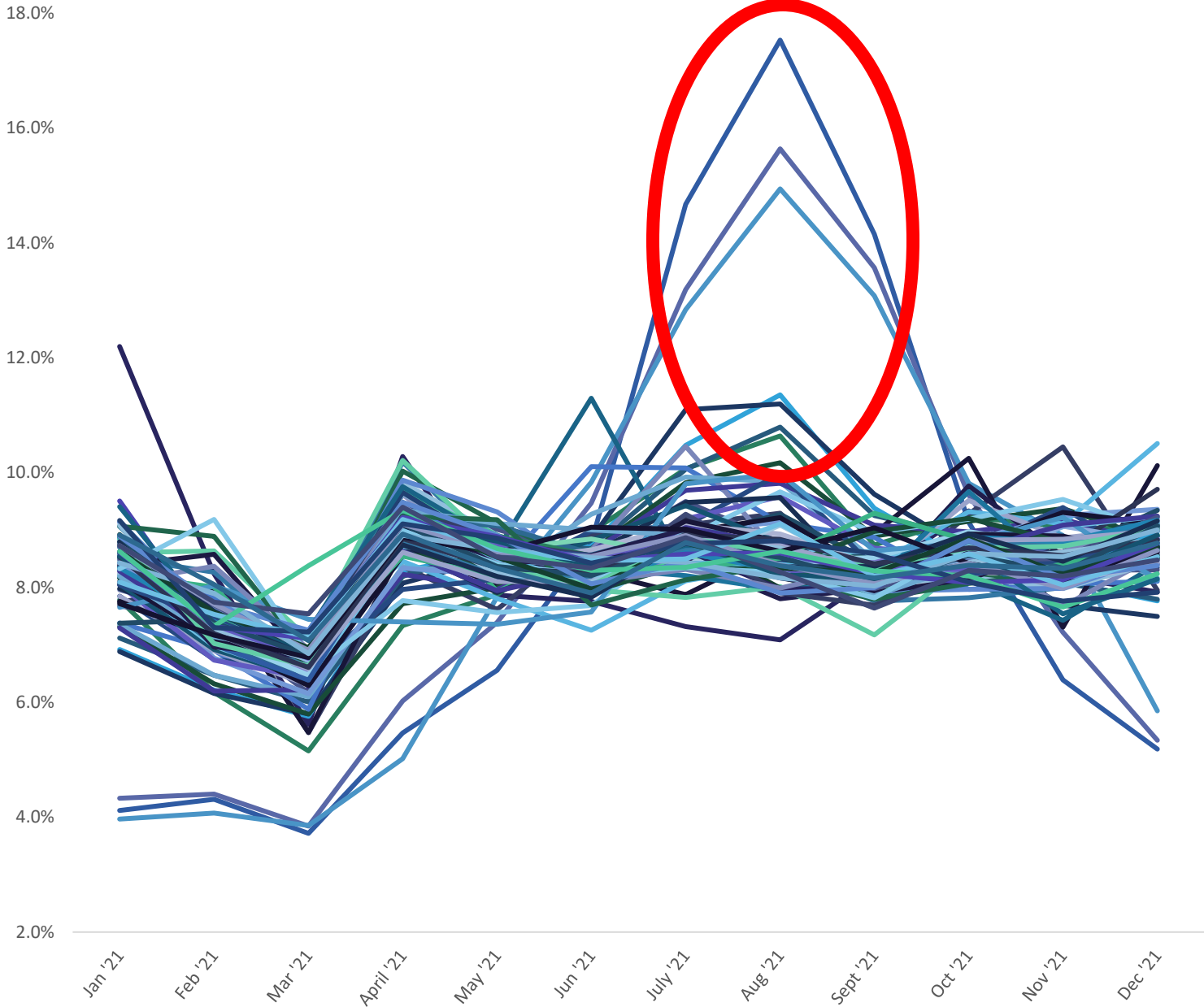
MONTHLY REPORT OF STATE SALES AND USE TAX GROSS COLLECTIONS AND TAXABLE SALES

Data are compiled from reports and remittances made by taxpayers, and are classified according to sales and use tax registrations. Detail data from this report may not be directly comparable to that in reports for other months because of corrections in registrations affecting collections and taxable sales within the business and county classifications, and changes in the sales and use tax law. NO county sales and use taxes are included in this report.

TABLE 1. STATE SALES AND USE TAX: GROSS COLLECTIONS AND TAXABLE SALES BY COUNTIES

July 2019 Report					
County	Gross Collections*	Taxable Sales and Purchases*	County	Gross Collections*	Taxable Sales and Purchases*
Alamance	906,996	19,053,006	Macon	2,637,862	55,114,496
Alexander	353,488	7,351,706	Madison	554,376	11,575,101
Alleghany	696,783	14,635,410	Martin	863,470	17,958,772
Anson	1,301,564	27,280,202	McDowell	1,758,688	36,773,483
Ashe	1,519,148	31,813,090	Mecklenburg	101,350,491	2,126,473,455
Avery	2,361,760	50,517,843	Mitchell	635,871	13,305,230
Beaufort	341,218	7,082,989	Montgomery	968,676	20,273,012
Bertie	935,444	19,734,014	Moore	6,245,815	131,068,207
Bladen	10,251,967	215,473,010	Nash	4,648,136	97,396,986
Brunswick			New Hanover	22,873,642	479,763,320
Buncombe	24,077,379	504,384,945	Northampton	440,203	9,244,008
Burke	3,278,484	69,043,670	Onslow	10,460,432	219,273,246
Cabarrus	15,271,704	320,976,540	Orange	8,376,776	175,267,657
Caldwell	2,788,565	58,385,817	Pamlico	473,460	9,880,077
Camden	280,325	5,917,153	Pasquotank	2,411,810	50,554,834
Carteret	7,322,192	154,317,518	Pender	2,878,893	60,719,576
Caswell	307,180	6,436,522	Perquimans	306,879	6,547,976
Catawba	10,506,453	221,708,855	Person	1,436,071	30,182,299
Chatham	2,843,116	59,568,864	Pitt	10,150,019	213,127,350
Cherokee	1,508,518	31,463,566	Polk	721,519	15,136,760
Chowan	549,045	11,492,581	Randolph	5,276,184	110,545,937
Clay	400,466	8,392,249	Richmond	1,744,859	36,507,062
Cleveland	3,973,638	83,161,047	Robeson	4,718,762	98,908,354
Columbus	1,884,550	39,259,557	Rockingham	3,160,237	66,148,587
Craven	5,393,555	113,282,119	Rowan	5,755,365	120,603,557
Cumberland	18,299,729	383,701,612	Rutherford	2,790,927	58,485,031
Currituck	4,205,357	88,375,386	Sampson	2,004,875	41,967,089
Dare	11,321,288	238,039,315	Scotland	1,310,039	27,462,050
Davidson	6,152,100	128,714,518	Stanly	3,028,360	63,355,343
Davie	1,626,925	34,052,537	Stokes	1,128,733	23,624,068
Duplin	1,924,283	40,245,406	Surry	3,979,823	83,207,230
Durham	33,416,382	701,199,738	Swain	751,195	15,779,525
Edgecombe	2,750,909	57,749,697	Transylvania	1,822,202	38,189,691
Forsyth	23,900,102	500,226,864	Tyrrell	107,721	2,175,576
Franklin	1,878,114	39,321,254	Union	9,417,298	196,976,067
Gaston	11,036,575	230,883,572	Vance	1,940,218	41,247,934
Gates	161,009	3,354,328	Wake	84,451,630	1,772,230,516
Graham	389,208	8,168,019	Warren	405,756	8,587,857
Granville	1,736,017	36,226,823	Washington	383,427	8,024,230
Greene	349,468	7,257,561	Watauga	3,974,578	83,266,866

August 2021 Taxable Sales and Purchases as a % of 2021 Total Taxable Sales and Purchases by County



1. Currituck – 17.5%
2. Dare – 15.6%
3. Hyde – 14.9%
4. Brunswick – 11.4%
5. Carteret – 11.2%
6. Pender – 10.8%
7. Swain – 10.6%
8. Macon – 10.2%
9. Polk – 10.0%
10. Avery – 10.0%

In conclusion...

- Seasonality is something you should be aware of when reviewing data
 - Pay attention to the source.
 - Affects all LMI available more than once a year.
- Each community is different.
- Compare apples to apples!
 - Yearly data evens out quarterly swings.
 - Look at year over year
- Seasonally adjusted data available at the state level

Questions?



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