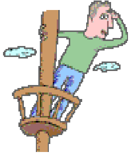

NORTH CAROLINA ECONOMIC CONDITION AND OUTLOOK, 3rd QUARTER 2021
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RECESSION AND RECOVERY DURING THE PANDEMIC

Summary

1. **The North Carolina economy continues to recover from the Covid-19 recession. The worst of the recession was during Spring, 2020. When data become available, aggregate production (GDP) will have returned to pre-pandemic levels in Summer, 2021.**

2. **Among North Carolina's major economic sectors, the recession was most severe in farming, hospitality/leisure, transportation/warehousing, and personal services.**

3. **As of the first quarter of 2021, aggregate production had exceeded pre-recession levels in farming, construction, manufacturing, trade, and professional services.**

4. **Using the percentage loss in total employment as the measure, the Covid-19 recession was most severe in Rural North Carolina, and in the Asheville, Greensboro-High Point, Hickory, and Wilmington metropolitan areas.**

5. **As of July 2021, aggregate employment reached 99% or more of pre-pandemic employment in the Burlington, Durham-Chapel Hill, Greenville, Hickory, Jacksonville, and Raleigh metropolitan areas.**

6. **Although the state unemployment rate has fallen from close to 14% during the recession to almost 4% in Summer, 2021, the state's labor force participation rate is still well below its pre-pandemic levels.**

7. **The massive federal financial assistance provided during the pandemic pushed statewide personal income and retail sales above pre-pandemic levels.**

8. **Three big issues emerging during the economic recovery are inflation, government debt, and labor market changes. The inflation rate has recently trended higher; the question is for how long? While the national debt has risen substantially, low interest rates keep servicing the debt affordable, for now. The pandemic has already generated large changes in the labor market. The challenge will be for adequate training and re-training programs to accommodate these changes.**

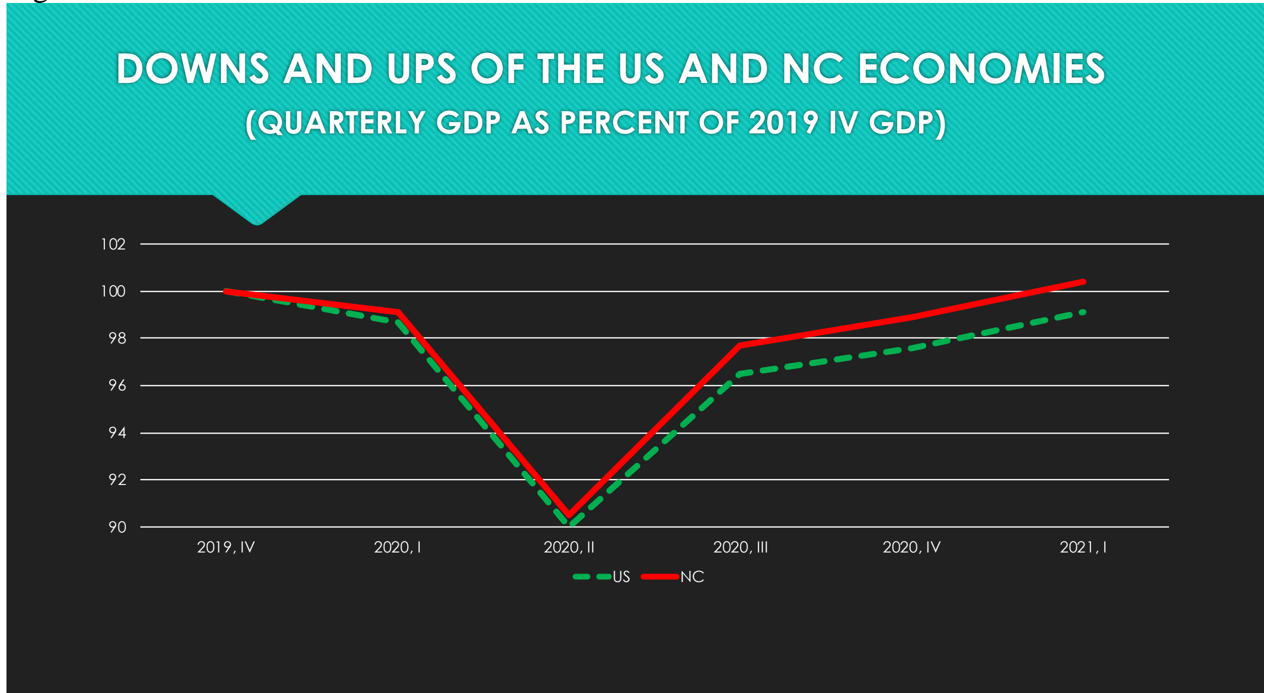
9. **North Carolina's economy is forecasted to expand in 2022 and 2023. However, the strength of the growth will depend on the path of the Covid-19 virus. If the virus soon becomes completely controlled, North Carolina's aggregate production (GDP) will be 10% higher in 2023 than prior to the pandemic. But if Covid-19 variants persist, the growth rate will be cut in half to 5%.**

10. **The long run economic prospects for North Carolina are very positive. North Carolina has been among the few states with low per capita rates of both Covid-19 deaths and job losses during the pandemic. This means North Carolina will be viewed as a relatively "safe state." During the expected national geographic re-sorting of households and businesses after the pandemic, North Carolina should be in a position to attract both new households and new businesses. The expected expansion of high-speed-internet to underserved areas and the greater use of the internet to access work, services, and health care will also increase economic growth and prosperity in North Carolina's small towns and rural regions.**

THE UNEVEN RECOVERY CONTINUES

After the tremendous drop in the economy during the second quarter of 2020, the economy recovered strongly in the third quarter of that year (Figure 1). By the end of the first quarter of 2021 (latest data available), the value of aggregate national economic production (Gross Domestic Product, or GDP) had surpassed its pre-Covid-19 level. North Carolina's GDP likely reached its pre-pandemic level in the second quarter of 2021.

Figure 1. Paths of US and North Carolina GDP.



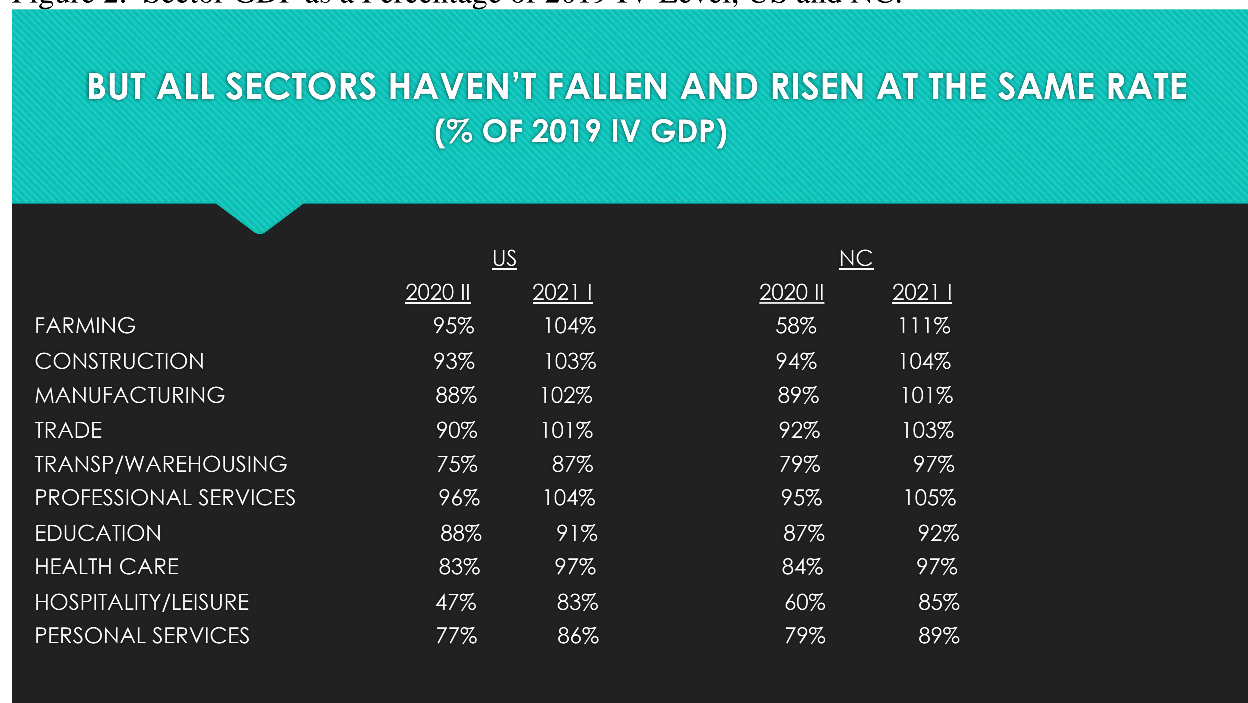
Source: US Bureau of Economic Analysis. Based on inflation-adjusted values.

But all sectors of the economy did not fluctuate during the recession and recovery in the same way. Figure 2 shows GDP in the second quarter of 2020 (the depth of the recession) and the first quarter of 2021 as a percentage of GDP in the pre-pandemic 2019 fourth quarter for the major sectors of the economy in both the US and North Carolina.

Looking at the nation first, the hardest hit sectors in 2020 II were transportation/warehousing (75% of 2019 IV), hospitality/leisure (47% of 2019 IV), and personal services (77% of 2019 IV).

In North Carolina, the same three sectors also suffered significant declines, with transportation/warehousing at 79% of 2019 IV, hospitality/leisure at 60% of 2019 IV, and personal services at 79% of 2019 IV. But, unlike the nation, the North Carolina sector with the largest decline was farming, with GDP in 2020 II at only 58% of its pre-pandemic 2019 IV level.

Figure 2. Sector GDP as a Percentage of 2019 IV Level, US and NC.



BUT ALL SECTORS HAVEN'T FALLEN AND RISEN AT THE SAME RATE
(% OF 2019 IV GDP)

	US		NC	
	2020 II	2021 I	2020 II	2021 I
FARMING	95%	104%	58%	111%
CONSTRUCTION	93%	103%	94%	104%
MANUFACTURING	88%	102%	89%	101%
TRADE	90%	101%	92%	103%
TRANSP/WAREHOUSING	75%	87%	79%	97%
PROFESSIONAL SERVICES	96%	104%	95%	105%
EDUCATION	88%	91%	87%	92%
HEALTH CARE	83%	97%	84%	97%
HOSPITALITY/LEISURE	47%	83%	60%	85%
PERSONAL SERVICES	77%	86%	79%	89%

Source: US Bureau of Labor Statistics.

The two columns in Figure 2 labelled "2021 I" show the strength of the recovery in the sectors. For the US, several sectors – farming, construction, manufacturing, trade, and professional services – actually exceeded their level of production of 2019 IV. Education and health care were not far behind. The sectors lagging the most were the same sectors that had the deepest declines – transportation/warehousing, hospitality/leisure, and personal services. The same pattern occurred in North Carolina. Interestingly, the North Carolina sector that experienced the deepest decline – farming – also had the strongest economic rebound.

The depth of the Covid-19 recession and the strength of the recovery also varied geographically within North Carolina. Figure 3 uses total employment data instead of unavailable local GDP data to measure these differences. Total employment in April 2020, at the height of the pandemic, and in July 2021, the latest month available, are shown as a percentage of pre-pandemic total employment in February 2020 for the nation, state, and the state's major regions.

North Carolina had a slightly lower relative loss of jobs during the pandemic, with 88% of the state's jobs remaining in April 2020 from the pre-pandemic level compared to 85% for the nation. However, several regions in North Carolina were below the 85% national rate, including Asheville, Wilmington, and Rural NC. Asheville and Wilmington are very dependent on tourism, and tourist activity was hard-hit during the pandemic. Jobs in Rural NC were likely adversely impacted by the large contraction in the state's farming sector.

By July 2021, North Carolina's total employment had recovered to 99% of the pre-pandemic February 2020 level, compared to recovery of 96% for the nation (Figure 3).

Figure 3. Employment in North Carolina Regions as a Percentage of Employment in February 2020.

DECLINE AND RECOVERY HAS ALSO VARIED WITHING NORTH CAROLINA
TOTAL EMPLOYMENT AS % OF EMPLOYMENT IN FEBRURAY 2020

	%, APRIL 2020	%, July 2021		%, APRIL 2020	%, JULY 2021
ASHEVILLE	82%	94%	HICKORY	85%	99%
BURLINGTON	87%	99%	JACKSONVILLE	88%	102%
CHARLOTTE	87%	98%	NEW BERN	90%	97%
DURHAM-CH	91%	99%	RALEIGH	87%	99%
FAYETTEVILLE	89%	98%	ROCKY MOUNT	92%	97%
GOLDSBORO	92%	97%	WILMINGTON	83%	98%
GREENSBORO-HP	86%	97%	WINSTON-SALEM	87%	98%
GREENVILLE	90%	99%	RURAL NC	81%	93%
NORTH CAROLINA	88%	99%	US	85%	96%

Source: US Bureau of Labor Statistics.

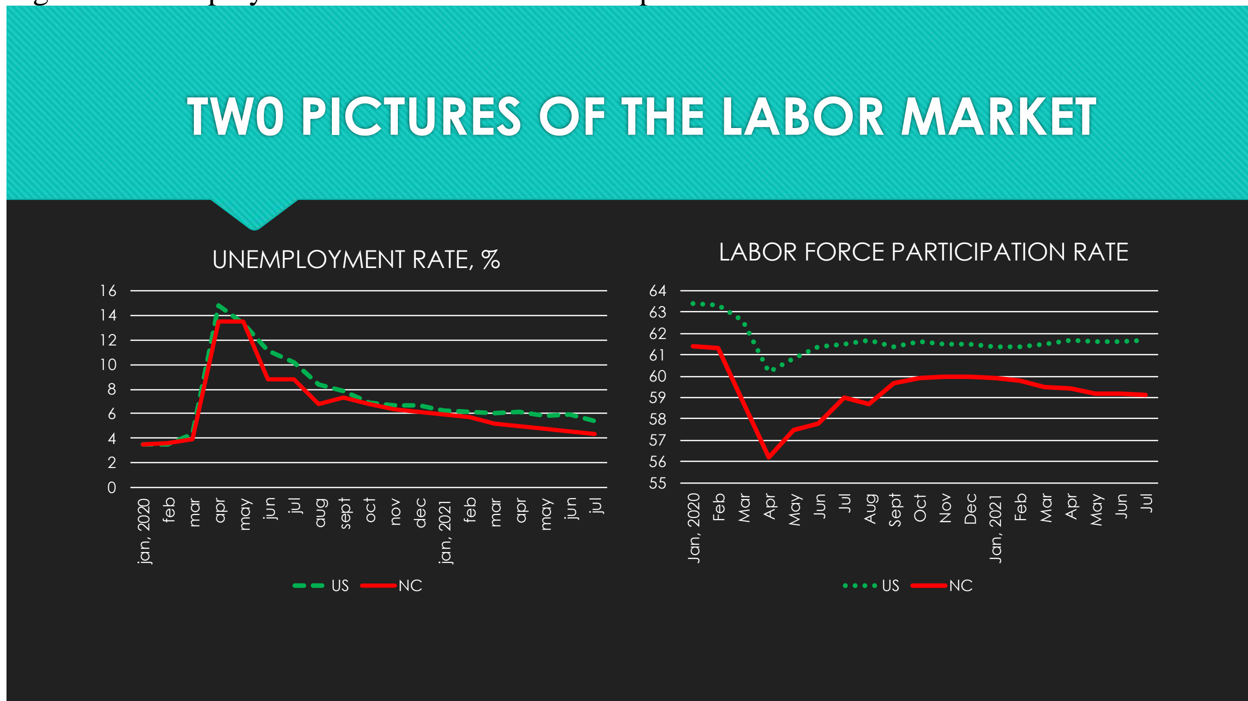
The highest recovery rates in the state were Jacksonville (102%), Raleigh, Durham-Chapel Hill, Greenville, Burlington, and Hickory (all at 99%), and Charlotte, Fayetteville, Wilmington, and Winston-Salem (all at 98%). The lowest employment recovery rates were in Rural NC (93%) and Asheville (94%).

SURPRISES IN THE LABOR MARKET

After major deterioration during the Covid-19 recession, the labor market has bounced back, but not without questions. The graph on the left side of Figure 4 gives the unemployment rates in the nation and North Carolina since the beginning of the pandemic. Unemployment rates surged in April 2020, but have declined since then. North Carolina's jobless rate has generally been lower than the national rate.

The graph on the right side of Figure 4 shows labor force participation rates (LFPR) in the nation and North Carolina since the start of the pandemic. The LFPR is the percentage of the civilian population 16 years and older who are either working or actively looking for work. There was an expected deep drop in the LFPR in both the nation and in North Carolina during the Covid-19 recession, then followed by a recovery. However, in both regions the increase in LFPR is still well below the pre-pandemic levels. The softness in LFPR is consistent with the difficulty many employers have experienced in hiring workers during the economic recovery.

Figure 4. Unemployment and Labor Force Participation Rates in the US and North Carolina.



Source: U.S. Bureau of Labor Statistics.

The underlying question is why LFPR has not fully recovered. Several answers have been offered, including fear of looking for work while the Covid-19 virus persists, financial support of jobless individuals from stimulus checks and supplemental unemployment compensation, a decline in real (inflation-adjusted) wage rates, gains in the stock market motivating retirements, and the "up-skilling" of laid-off workers.

Each of these factors likely has had an impact on hiring difficulties. It is logical that some unemployed workers may not feel safe visiting potential employers while the virus is still active. The federal government has provided substantial financial help to households during the pandemic, especially those who are unemployed. Wage rates have recently fallen relative to inflation, resulting in a drop in the financial benefit from working. For individuals working at or near the minimum wage, the financial value of federal and state unemployment benefits could easily exceed earnings from working, thereby decreasing the incentive to look for work. Several studies have confirmed such as impact.[1] However, this impact is likely short-lived as federal supplemental jobless benefits ended in early September, 2021. For older workers near retirement, the fact that the stock market is one-third higher than prior to the pandemic could certainly reduce their motivation to work.

But it's the last factor – the up-skilling of laid-off workers – that could be the most significant for the labor market. Surveys show that a large percentage of workers – especially young workers – have expressed a goal of changing their career track as a result of the

[1] Scott Sumner, "Unemployment Insurance Reduces Employment," https://www.econlib.org/unemployment - insurance-reduces-employment/.

pandemic.[2] They have used the financial support provided by governments during the pandemic to take time to improve their skills and put themselves in a position to pursue better-paying jobs with more long-term advancement possibilities. Sectors like technology, health care, and some professional fields would be targets of these individuals.

Obviously, individuals who improve their skill set and earnings contribute to a larger and more productive economy. But how will those firms and sectors they left cope with the lack of labor? There are two options. One is for the firms to significantly increase wage rates and benefits to enable them to better compete for workers. But there are limits to this response, especially if it results in higher prices for their products and services. Alternatively, the firms can implement greater use of labor-saving technology and automation. Examples already being used include robots delivering meals to tables in restaurants and kiosks for ordering at fast-food outlets. Ironically, prior to the pandemic many economists worried technology and automation would create higher unemployment for workers in the sectors. Now, the technology and automation may be necessary to replace vanishing labor.

FEDERAL BACK-UP FOR HOUSEHOLDS

The federal government provided an unprecedented amount of financial support to the economy during the pandemic. Once all the funds are deployed, the federal aid will total $6 trillion. North Carolina is on pace to receive $80 billion.

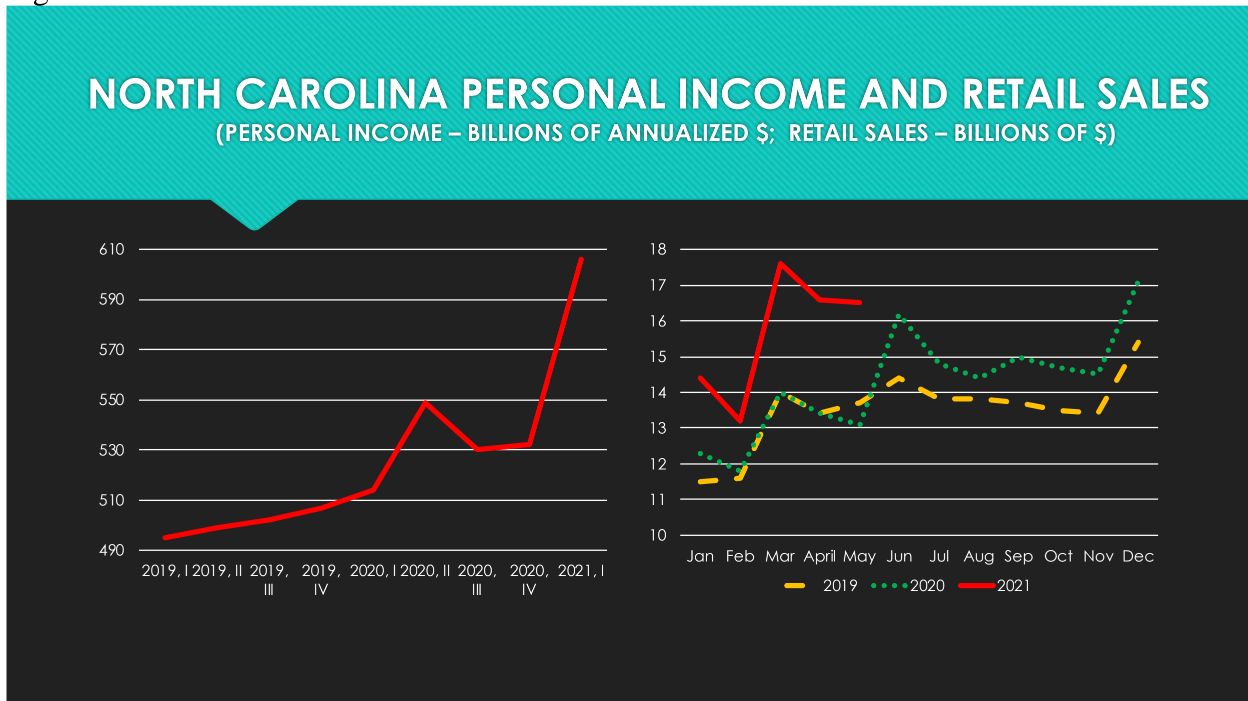
The purpose of the support was twofold. First was to help households, businesses, and institutions survive the pandemic and continue functioning. Particularly for households, no one wanted to see destitute conditions overcome millions – likely tens of millions – of people. The second goal was to prevent the economy from collapsing and plunging the country into a deep and long recession.

The data suggest these objectives were met. Although there was a deep recession in the second quarter of 2020, it was the shortest recession on record and was followed by an equally sharp rebound in the third quarter of 2020.

Figure 5 shows the path of two key measures of the North Carolina economy, personal income and retail sales. Personal income (left side of graph) dipped in early 2020, but then stabilized and grew sharply at the end of 2020 and into early 2021. Retail sales (right side of graph) show monthly trends in retail sales for 2019, 2020, and early 2021. Comparing 2019 and 2020, retail sales in 2020 closely tracked the same sales in 2019 in the first half of each year. But in the second half of the years, retail sales in 2020 trended significantly higher than sales in 2019. There is a similar finding for 2021 and 2020. For the first five months of the year, retail sales were noticeably higher in 2021. The federal aid therefore appeared to provide significant support for the North Carolina economy.

[2] Heather Long and Scott Clement, "Nearly a Third of Workers Under 40 Considered Changing Careers During the Pandemic," *The Washington Post*, August 16, 2021.

Figure 5. North Carolina Personal Income and Retail Sales.



Source: US Bureau of Economic Analysis; NC Dept. of Revenue. Personal income are inflation-adjusted dollars. Retail sales are nominal dollars.

WORRIES ABOUT BIG ISSUES

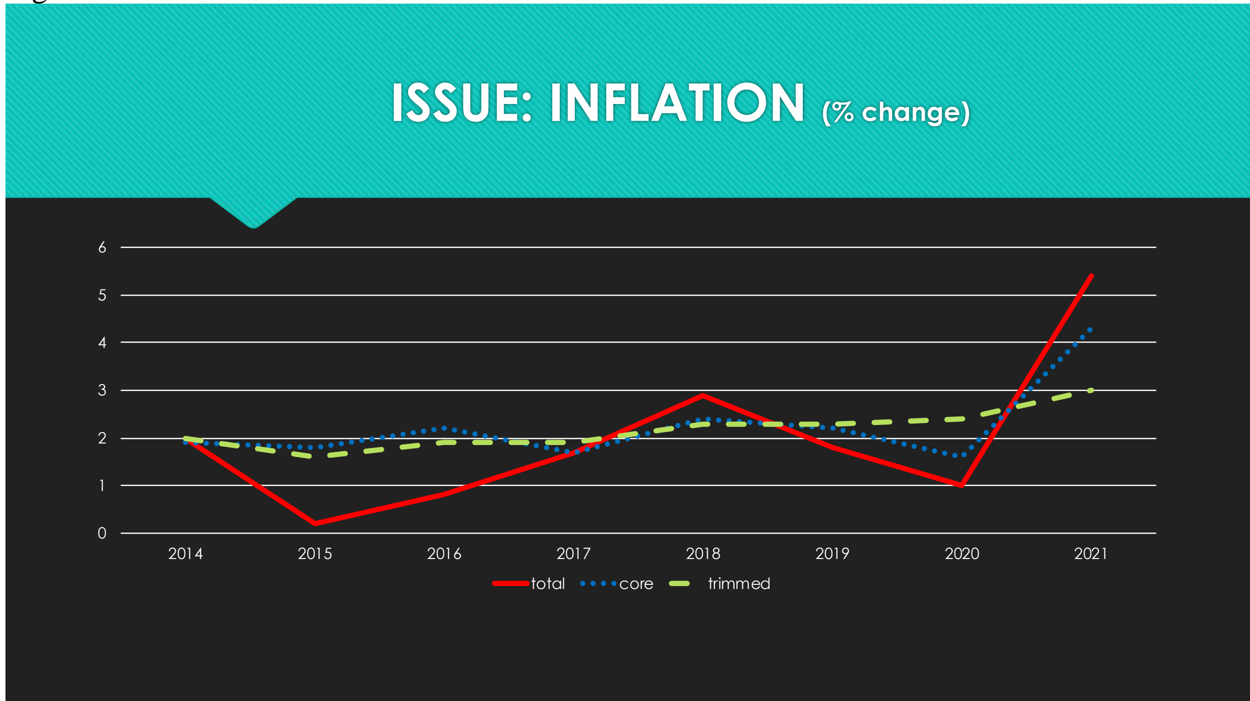
As the economy moves beyond the pandemic, there are three big issues attracting concern: rising national debt, faster inflation, and adaptability in the labor market.

With all $6 trillion of the federal pandemic assistance borrowed, the *national debt* now exceeds national annual income (GDP) for the first time since World War II. This has sparked renewed worries about the ability of the nation to carry the debt and implications for long-run financial viability.

At this point, those worries appear to be overstated. The ability to carry debt – whether the debt is owed by a person, company, or government – is based on three factors; the size of the debt, the interest rate charged on the debt, and the borrower's income. While the national debt is very large, fortunately interest rates are very low. Also, national income is high enough so that the ratio of the interest payments on the debt as a percent of national income is relatively low, at about the same level as during the 1950s to 1970s and half the level as in the 1980s and early 1990s.

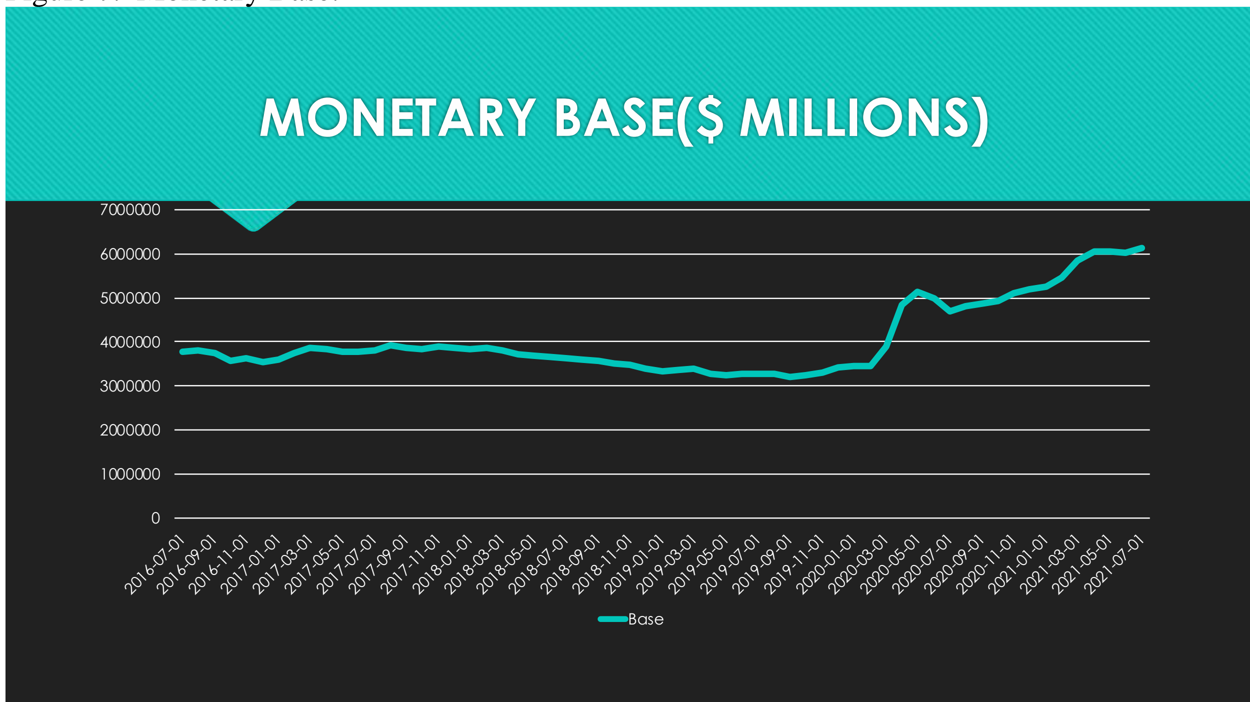
Of course, there are "opportunity costs" to the additional $6 trillion debt, meaning the $6 trillion could have been used in other ways that would have created benefits. But if the $6 trillion had not been borrowed to prop up the economy during the pandemic, there's a real chance a

Figure 6. Alternative Measures of the Inflation Rate.



Source: US Bureau of Labor Statistics. % changes are annualized.

Figure 7. Monetary Base.



Source: Federal Reserve Bank of St. Louis.

devastating collapse in the economy along with tremendous misery and loss would have occurred. If allowed to happen, it could have taken the economy years to recover.

Inflation is another worry about the post-pandemic economy. Figure 6 shows three alternative measures of inflation. The "total" inflation rate is the official rate. It is based on tracking prices of thousands of commonly purchased consumer products and services. Each price is weighted by the importance of its product or service in the typical household budget before combining all the price changes into a total inflation rate. The "core" inflation rate is the rate after excluding volatile food and energy prices. The "trimmed" inflation rate is the rate after excluding the 8% of products and services with the highest price increases and the 8% of products and services with the lowest price increases.

In recent years the official inflation rate was no higher than 3% and stayed below 2% for most of the period. The "core" and "trimmed" rates hovered around 2%. But since 2020, all three measures have trended higher, with the official rate rising above 5% (annualized) in early 2021.

There are two explanations and two forecasts for inflation. One says the higher recent inflation rate is temporary because it is based on supply-side disruptions caused by the pandemic that have not yet been repaired. Once these disruptions are fixed, the inflation rate will subside to its recent 1% to 2% annual rate range. At most, the higher inflation rate will last until early 2022.

The second explanation doesn't deny supply-side disruptions, but puts more focus on the demand side. As already shown, the $6 trillion federal financial aid program has put tremendous financial resources in the hands of households and businesses. As the pandemic hopefully recedes and people act on their "pent-up demand" (desired spending that was delayed during the pandemic), it is expected spending will surge. Even with a repaired supply chain, desired spending will exceed the supply of products and services. The result is a faster rise in prices. This explanation sees the elevated inflation rate persisting well into 2022, with the peak rate possibly reaching at least 6%.

Before turning to the third worry, it should be noted the Federal Reserve (Fed) has a role in both the debt and inflation worries. The Fed has supported both the financial aid provided by the federal government as well as the recovery in the private sector in two way. One is by purchasing the new federal debt by increasing the money supply (Figure 7). Second is by keeping the key interest rate the Fed controls very low. Both efforts could be considered as inflationary.

At some point the Fed will reverse course and sell some of its federal debt and increase its key interest rate. While these actions could help contain inflation, higher interest rates would elevate federal debt payments and potentially slow the economic recovery.

The third worry is about the *labor market*. The recovery from the 2008-2009 recession was termed the "jobless recovery" due to the slow increase in jobs and the lingering high

unemployment rate. The recovery from the Covid-19 recession could be called the "workerless recovery" based on the relatively large numbers of jobs that have gone unfilled.

Potential reasons for the workerless recovery were presented earlier. Some of the reasons are temporary, meaning when they are no longer valid – such as the federal supplemental unemployment compensation – more jobless workers will seek jobs. But there's a longer run concern about the post-pandemic economy creating disruptions in job markets that will require on-going re-training for a significant number of workers. Ironically, the workerless recovery may accelerate this needed re-training as a result of businesses turning to technology and automation when they can't find workers. The more businesses that adopt technology and automation to substitute for labor will likely motivate other businesses to do the same. Hence, within a few years, the workerless recovery could turn into the jobless recovery.

FORECASTS

This section presents forecasts for North Carolina's aggregate production (GDP) and the state's unemployment rate. For each measure, two alternative forecasts are presented. One assumes the Covid-19 delta variant is controlled before the end of 2021, thereby allowing the economy to expand free of concerns about the virus. The second forecast is based on the pessimistic assumption that the delta variant continues, or is followed by another variant. Under this assumption economic progress is slower.

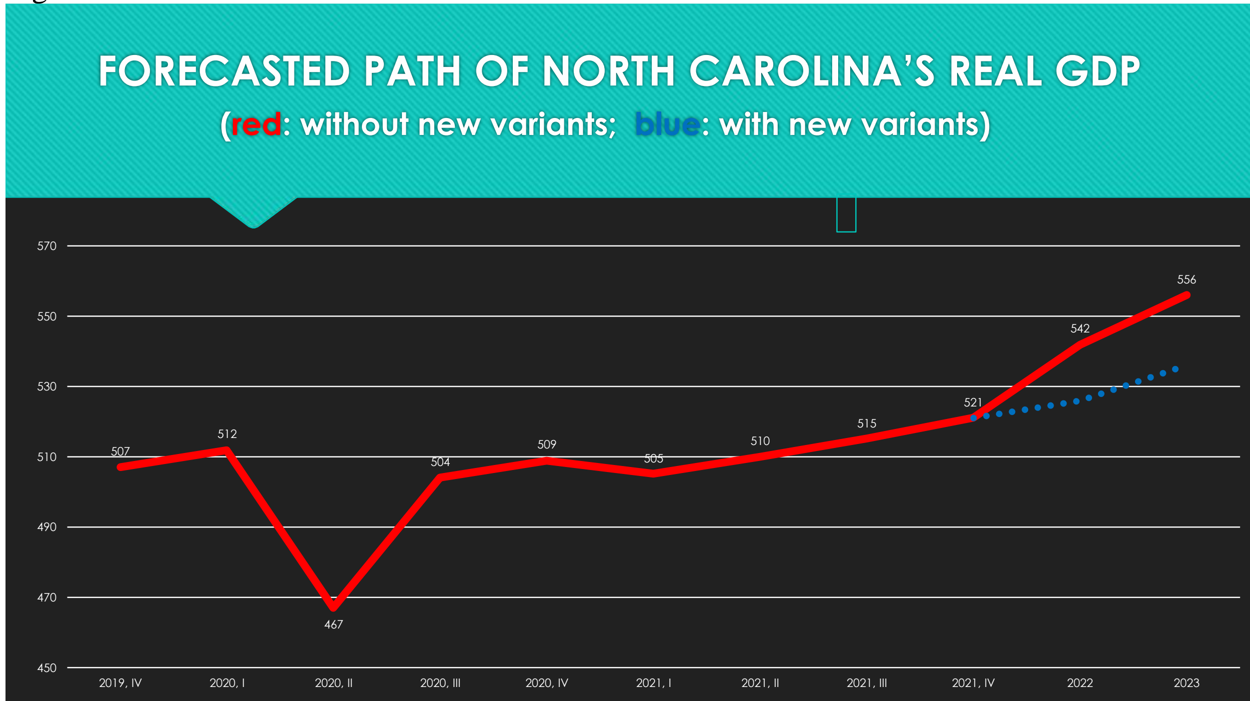
Figure 8 shows the forecasts for North Carolina GDP. Under the optimistic assumption of the delta variant being controlled in 2021, GDP increases strongly in late 2021 and into 2022, setting new records for the size of the state economy. Growth continues in 2023 with GDP reaching $556 billion, 10% higher than prior to the pandemic in 2019.

Using the pessimistic assumption of continuing struggles with the Covid-19 virus, state GDP does expand in the next two years, but GDP in 2023 will only be 5% higher than in the pre-pandemic years of 2019.

Similar patterns and differences are seen for the state unemployment rate forecast in Figure 9. Compared to the 4.4% jobless rate in the summer of 2021, the optimistic forecast projects an employment rate of 4% in 2022 and 3.8% in 2023, still higher than the pre-pandemic rate of 3.5% in late 2019. Even with the pandemic under control, shifts in the types of jobs needed by employers will require substantial re-training, thereby keeping the jobless rate higher until the supply of skills meets the demand for skills. The pessimistic scenario has the jobless rate effectively flat for the next two years, rising slightly in 2022 and falling slightly in 2023.

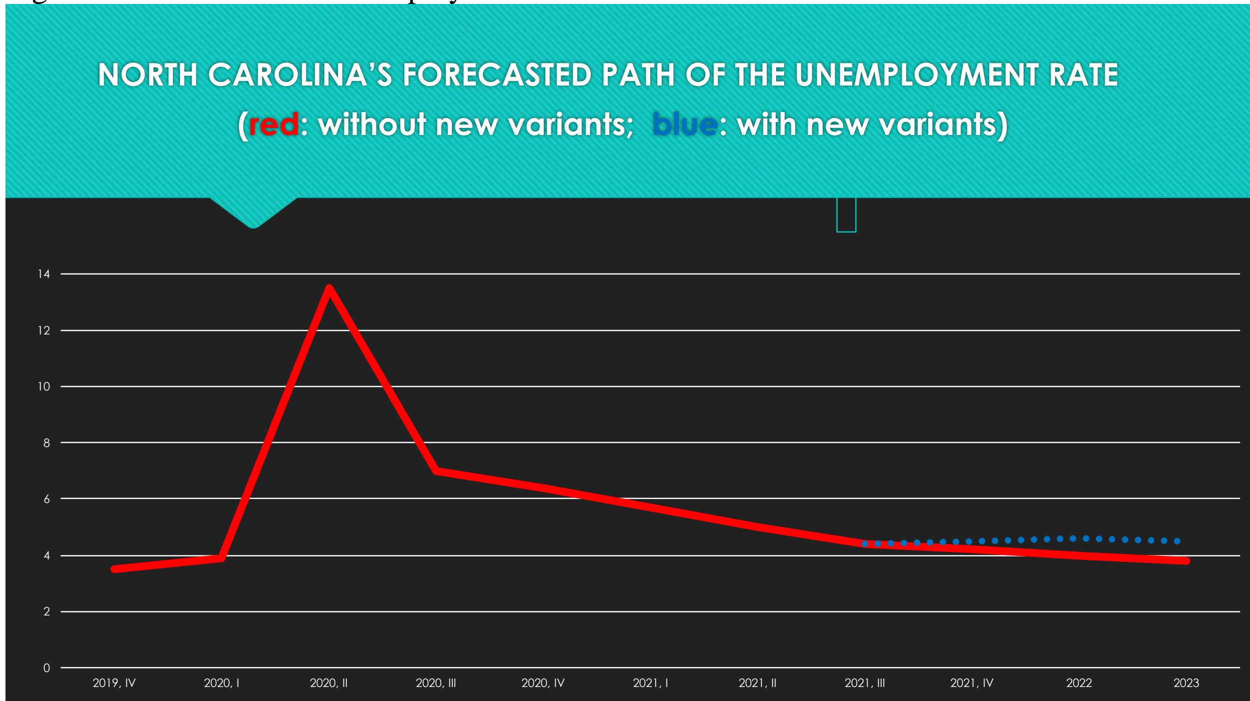
The shifts in occupational demand will be similar under both assumptions. Advances in the abilities of technology and automation to perform tasks will mean slow or negative growth in in low-skilled, physical jobs, especially those requiring minimal analysis and evaluation of the tasks. In contrast, the fastest growth will be in high-skilled, cognitive jobs in technology, health care, logistical, and professional jobs. Growth will also be strong in support jobs in these fields that require less training.

Figure 8. North Carolina GDP Forecasts.



Source: US Bureau of Economic Analysis and author's projections.

Figure 9. North Carolina Unemployment Rate Forecasts.



Source: US Bureau of Labor Statistics and author's projections.

LONG-RUN PROSPECTS FOR NORTH CAROLINA

Eventually the pandemic will be over, and therefore it is useful to look ahead to the economy in the long run.

Like all states, North Carolina has suffered major human and monetary losses from the Covid-19 virus. However, on a comparative basis to other states, North Carolina's losses have been relatively low. Covid-19 deaths per capita and job losses per capita during the recession have both been low in North Carolina compared to other states.[3]

This means North Carolina will be considered to be a relatively "safe" state for dealing with any future pandemics. If – as many futurists expect – there will be a "geographic re-sorting" of businesses and population in the post-pandemic economy, then North Carolina should be the recipient of more people and more businesses moving to the state. Rather than expecting a state population of 14 million in 2050,[4] the result could easily be higher at somewhere between 15 and 16 million.

The state could also be re-shaped by forces growing out of the pandemic. Universal high-speed internet is now widely recognized as a necessity in the modern world, and should be accomplished by 2030. This will allow more households and businesses to take advantage of "remote activities" - like remote work, remote access to services, and remote delivery of products – that were widely used during the pandemic. And while metropolitan areas in the state will continue to be fast-growing, the greater use of remote-access will allow more small-town and rural areas to attract households and businesses and take part in economic expansion. The urban-rural divide could finally be narrowed.

[3] https://hamiltonplacestrategies.com/50-states-50-pandemic-responses-an-analysis-of-jobs-lost-and-lives-lost/.
[4] https://files.nc.gov/ncosbm/demog/countygrowth_2050.html.