

Georgia Economic 2021 Outlook



Selig Center for
Economic Growth

Terry College of Business

UNIVERSITY OF GEORGIA

Georgia Economic 2021 Outlook

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Selig Center for Economic Growth

Terry College of Business
The University of Georgia

Benjamin C. Ayers
Dean

Jeffrey M. Humphreys
Selig Center Director

Lorena M. Akioka
Managing Editor

CONTRIBUTORS

Jeffrey M. Humphreys
Selig Center Director

Alexandra P. Hill
Senior Research Analyst

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If we avoid another lockdown of the population and broad shutdown of the economy, the Covid-19 recession is over. Massive fiscal and monetary policy responses made this three-month (March-May) recession the shortest ever. The fiscal policy responses authorized in spring 2020 equaled almost 13 percent of pre-pandemic GDP. In addition, the initial fiscal policy responses were very timely, with government assistance payments quickly distributed to households and businesses. The monetary policy response also was timely and very aggressive. The Federal Reserve quickly cut policy interest rates to zero, engaged in massive quantitative easing, and set up a wide range of credit facilities to support the credit markets, thus preventing the economic crisis created by Covid-19 from morphing into a financial crisis. Credit markets—the lifeblood of any modern economy—continued to function.

In addition, the broad stay-at-home orders issued by many states in March and April were partially lifted in May and June. It helped tremendously that the U.S. economy was in very good shape when the pandemic began. The U.S.-China trade war, paradoxically, hardened businesses' supply chains against the logistics problems that accompanied the global lockdowns. So, once government stimulus hit the streets and restrictions on mobility and business were lifted, things started to reopen.

Although brief, the Covid-19 recession was very steep and historically unprecedented. Inflation-adjusted (real) GDP fell at an annualized rate of 32 percent in the second quarter of 2020, following a 5 percent (annual rate) drop in the first quarter. The annualized rate of decline shows how much economic activity would have plunged if a drop in GDP in that quarter were sustained for an entire year. It is a good way to gauge the intensity of a downturn. By this measure, the second quarter drop was the steepest economic contraction

ever recorded, reflecting the unique nature of a recession characterized by the deliberate shutdown of large swaths of the economy to contain a pandemic.

The 10 percent peak-to-trough drop in GDP over the course of this recession provides a better measure of its cumulative effect on the overall economy (as opposed to the intensity of the downturn within a single quarter). This decline was two and one-half times larger than the 4 percent drop experienced during the Great Recession that ended in 2009.

The labor market was severely impacted by the lockdowns, too. In just two months, 22 million jobs—one out of every seven—were lost. The unemployment rate soared from 3.5 percent in February to 14.7 percent in April. Many of those layoffs were initially classified as temporary but became permanent.

The Covid-19 recession is unique in the U.S. experience because its duration and depth were largely the result of deliberate government actions to shut down the economy in order to flatten the curve of the pandemic to prevent overburdening the healthcare system. The stay-at-home orders and business shutdowns saved lives, but the imposition of broad lockdowns and shutdowns dramatically steepened the downturn. A more limited use of these measures probably would have reduced virus transmission while simultaneously limiting the economic damage.

Looking ahead, we expect the economic recovery from this recession to occur in three distinct phases: an initial bounce in economic activity due to the lifting of stay-at-home restrictions and business re-openings; an extended slog of choppy growth that lingers until either a medical solution to the virus is widely adopted and/or herd immunity is attained; and then a period of steady, sustainable, above-average economic growth. The U.S. economy is now in the second phase, with many powerful crosscurrents and perhaps some

stops and re-starts. But we do not expect another round of widespread lockdowns of the population or shutdowns of businesses. Nonetheless, economic growth will not gain traction until an effective vaccine (or other medical solution) is widely available and adopted, which we assume will occur in mid-2021.

If this proves to be true, then GDP will increase by 3.5 percent in 2021, which compares favorably to the 4.2 percent decline estimated for 2020. Since the decline in GDP that occurred in 2020 was large—a peak-to-trough contraction of 10 percent—and the projected rate of 2021 GDP growth is modest (3.5 percent), GDP will not surpass its previous peak until early 2022. Similarly, labor market conditions will improve in 2021, but the number of jobs will grow more slowly than GDP. On an annual average basis, total nonfarm employment will expand by 0.9 percent in 2021. That compares well to the 6 percent decline estimated for 2020, but the labor market will not recover the 22.2 million jobs lost to the Covid-19 recession until 2024. Only then can the U.S. economy be considered healed, but it will be a very different economy.

The Bounce

Late in the second quarter, many states eased restrictions on businesses' operations and people emerged from the lockdowns. Many businesses fully or partially reopened, and pent-up demand was released. There was a sharp rebound in consumer spending. Retail sales quickly recovered and spending on both durable and nondurable goods quickly surpassed pre-pandemic levels. Retailers, home sellers, and providers of services that could not be postponed any longer benefitted the most.

Although the initial rush to spend represents a rebound from extreme shocks and massive economic stimulus rather than economic reality, activity surged. On an annualized basis, third quarter GDP increased by 27 percent, returning GDP to 95 percent of its pre-pandemic level. But the surge in economic activity was extremely uneven and many types

of businesses did not benefit very much as people shifted their spending from services to goods. The labor market also rebounded. In the initial three-month rebound (May through July), the number of jobs rose by 7.1 percent, reversing 42 percent of the peak-to-trough drop in employment.

The Slog

In the final quarter of 2020, the recovery slowed sharply as harsh realities of permanent job and income losses set in. Many of the fiscal stimulus programs passed in the early months of the pandemic are winding down, and politicians cannot agree on an additional stimulus package. Although consumer confidence was higher than during the lockdown, it was stuck at levels fundamentally inconsistent with solid growth in consumer spending. We estimate that the annualized rate of GDP growth dropped from 27 percent in the third quarter of 2020 to about 3 percent in the fourth quarter. Meanwhile, the pandemic continued.

In 2021, a balance of positive forces over negative forces should sustain economic recovery, but it will continue to be a slog. V-shaped recoveries for retailers and housing are the biggest positives—and the biggest exceptions. The recovery will not be V-shaped for most types of business. It will help that people have saved a lot and will spend some of it, and thus sustain consumer spending, which is vital to the recovery. The Federal Reserve also will do whatever it takes to support the struggling economy, including keeping policy interest rates at zero into 2023.

Covid-19 helped to dramatically accelerate the adoption of digital technology and working remotely. Capital spending, innovation, and productivity will benefit from the increasing digitization of the economy. Meanwhile, depleted inventories and firmer orders will shore up industrial production, albeit from depressed levels. A weaker dollar will make American exports less expensive in foreign markets and foreign imports more expensive in U.S. markets, but because most foreign economies will be struggling, the contribution that international trade makes to U.S.

GDP growth will be small.

There are nearly as many negatives. Most importantly, the pandemic is not over. Self-quarantine, contagion fears, and social distancing will continue to keep many businesses from returning to normal. We may see a resurgence of the virus during the traditional flu season, but very few states will risk a second shutdown because that would be economically devastating. Many high-contact businesses such as hotels, airlines, and restaurants will continue to operate at greatly reduced capacity, which will not be profitable. Some types of businesses such as live entertainment venues will remain closed, and some businesses will never reopen. The debt that companies incurred to survive the pandemic may limit their growth during the recovery. Increasingly, people will realize that their job and income losses are permanent and will spend less. Business and personal bankruptcies will rise dramatically 2021, which will be a source of persistent layoffs. In all, the year-over-year rate of GDP growth will be about 3.5 percent in 2021. Growth will be weak in early 2021, but if a vaccine is widely available by midyear, GDP growth will be strong after that.

New Normal

Once an effective vaccine and/or treatment is widely available, the U.S. economy will see steady above-average growth. If so, the third and fourth quarters of 2021 will experience annualized rates of GDP growth of about 5 percent. The labor market will begin to heal faster, too. If an effective vaccine is not developed by mid-2021, then it will take much longer to reach herd immunity and full economic recovery could be delayed by a year or more.

Recession Risks

A dramatic worsening of the pandemic could push the economy back into recession. But even without a dramatic surge in cases, more federal fiscal stimulus may be needed to avoid a double-dip recession. A mistake in the government's response to the pandemic is a downside risk to the forecast. Inadequate federal fiscal

stimulus and/or mistakes in the wind down of the massive stimulus programs already in place are possible.

Recent rapid growth in lending to highly leveraged businesses is another risk. Corporate leverage is at an historically high 49 percent of GDP. The default risk is difficult to gauge, partially because a significant share of leveraged loans is held by the “shadow banking” sector, which includes small funds and finance companies. Defaults there could spill over into the formal finance sector and create a financial crisis. The Federal Reserve has noticed the rise in corporate debt levels and created a facility to buy corporate debt, but its ability to backstop non-investment grade debt is limited. Because interest rates are extremely low, leveraged lending to businesses probably will not trigger a double-dip recession in the coming year, but it could worsen a recession triggered by another factor—the size of the junk corporate bond market.

In addition to domestic risks, trade tensions with China and high levels of sovereign debt are two geo-

political risks capable of triggering another downturn. Even with the Phase One trade deal, the U.S.-China trade war may cause another recession and any major escalation could be fatal to America’s economic recovery. The higher tariffs enacted in 2018-19 were not a large enough percentage of GDP to push the U.S. economy into recession, but most remain in place and will be an economic headwind. At this juncture, a worsening of relations with China or other major trading partners is capable of pushing the U.S. economy into recession. Due to both the current pandemic and insufficient deleveraging after the last recession, sovereign debt levels are very high and could spark a global financial crisis. In sum, we estimate that there is a 40 percent risk of a recession before the end of 2021.

Consumer Spending

We predict that the consumer will be the economy’s strongpoint, with personal consumption expenditures expected to grow by about 4 percent in 2021. This will be quite an

accomplishment given that personal income is expected to decline due to a massive drop in federal assistance payments. The increase in consumer spending will be possible due to a drop in the personal savings rate from about 17 percent in 2020 to about 8 percent in 2021—or about \$1 trillion in spending out of accumulated savings.

Another factor powering increases in consumer spending is 0.9 percent job growth in 2021. Gradually improving labor market conditions will support modest growth in wages and salaries, with compensation per hour rising by about 1 percent. More importantly, the number of hours worked will rise. Unfortunately, personal income derived from all other major sources—transfer payments, earned interest, dividends, and rent—will drop.

Growth in consumer credit will contribute significantly to the projected increase in consumer spending. Consumer credit markets contracted significantly in 2020, but the pullback was confined to revolving credit. In 2021, credit will expand,

UNITED STATES BASELINE FORECAST, 2020-2021

United States	2016	2017	2018	2019	2020	2021
Gross Domestic Product, Bil of 2012\$	17,730.5	18,144.1	18,687.8	19,091.7	18,290.0	18,930.0
Percent change	1.7	2.3	3.0	2.2	-4.2	3.5
Nonfarm Employment (Mil.)	144.3	146.6	148.9	150.9	141.9	143.2
Percent change	1.8	1.6	1.6	1.4	-6.0	0.9
Personal Income, Bil. of 2012\$	15,251.1	15,991.7	16,493.1	16,887.9	17,505.9	16,990.5
Percent change	1.7	3.0	3.1	2.4	3.7	-2.9
Personal Income, Bil. of \$	16,160.7	16,948.6	17,851.8	18,551.5	19,442.0	19,228.1
Percent change	2.8	4.9	5.3	3.9	4.8	-1.1
Unemployment Rate (percent)	4.9	4.4	3.9	3.7	8.6	8.0
CPI-U, Annual Percent Change	1.3	2.1	2.4	1.8	1.1	1.9

Source: The Selig Center for Economic Growth, Terry College of Business, The University of Georgia, October 2020.

with revolving credit growing much faster than non-revolving credit. Job growth and the lower unemployment rate also will support credit growth. Another very positive factor is that household balance sheets are still in good shape. Credit will be more available and very inexpensive, thereby lessening debt burdens.

Another positive for the outlook for consumer spending is that many households secured historically low mortgage rates in 2020, lowering their mortgage payments. More will do so in 2021. Consumers will take on more home equity debt and will spend vigorously for home improvements, which is high-octane fuel for the economy.

Nevertheless, consumer confidence is not very high. Uncertainty about Covid-19, fears of a double-dip recession, the unemployment rate, and the wind-down of massive government support programs will keep consumers' confidence from rallying very much until a vaccine is widely available. Job growth should keep confidence above recessionary levels, but barely so.

Unfortunately, wealth-effect spending probably will be absent because a global savings glut has pushed up the prices of almost all types of assets. There's probably still some limited upside potential for home prices. Bond prices should hold firm, but equity markets are very richly valued, so stock prices are vulnerable to correction. That's a fundamental concern for consumer spending because growth in household wealth has been climbing since 2009, exceeding income growth in most years. Home prices should continue to increase slowly, which is important because real estate wealth tends to have a larger influence on overall consumer spending than equity-based wealth.

On an annual average basis, consumers' outlays will increase much faster (4 percent) in 2021 than in 2020 (-4 percent). Lenders will loosen credit to customers. Underpinned by pent-up demand, vehicle sales will rise by at least 15 percent as more people opt to use their own cars instead of public transportation during the pandemic.

Spending for durable goods and services will increase faster than spending for nondurable goods. Price increases and demographic factors will boost spending on pharmaceuticals and other medical products. Spending on groceries will rise moderately from already elevated levels, but once a vaccine is available that could change as people go out to restaurants again. Spending on clothing and footwear will increase slowly.

Among services, healthcare providers will see above average growth in spending. In the second half of 2021, the widespread availability of a vaccine will boost sales for many of the high-contact service businesses that can't fully return to normal as long as the pandemic rages. Although full economic recovery for many types of service businesses will take a long time, the year-over-year percentage gains will be very strong.

Labor Markets

The U.S. labor market will continue to recover slowly. On an annual average basis, total nonfarm employment will increase by 0.9 percent, which will not be enough to offset the massive job losses that occurred in 2020. Once a vaccine is available, job growth will accelerate sharply and become much more broadly based across industries.

Some industries that suffered the greatest job losses during 2020 will post the largest percentage gains in 2021. The hospitality industry is a good example. The "other services" industry, which includes many high-contact services, will also see fast job growth. Professional and business services firms will see the third fastest rate of job growth. The information industry will add jobs due to the rapid digitization of the economy and the rollout of 5G networks. Transportation and utilities will see limited or no job growth.

Manufacturing, retailing, construction, and government are expected to shed jobs. Industrial production will increase by about 5 percent due to firming orders and lean inventories, but production probably will not increase fast enough to offset jobs lost to

automation and other gains in labor productivity. Manufacturing will struggle due to trade tensions, supply chain disruptions, past appreciation of the dollar, and slow global growth. Despite trade tensions, reshoring production will not be a major factor in 2021, with the possible exception of pharmaceuticals and other medical goods.

Retail sales will increase, but retail jobs will continue to be lost as market shares shift to less labor-intensive channels. Homebuilders will be hiring, but job losses in nonresidential construction will offset job gains in residential construction. State and local government employment will decline due to disappointing revenue collections, with state government posting the largest drops.

GDP growth will sustain job creation, with the pace of job growth accelerating significantly once a vaccine is widely available. It will help that venture capital—which fuels job creation—will be more available in 2021. Less positively, foreign direct investment will remain very low, so gateway metropolitan areas that depend on it will suffer.

Assuming that labor force participation does not rise quickly, net job creation will be fast enough to cut the unemployment rate substantially, from its peak of 14.7 percent to about 7 percent in late 2021. The high unemployment rate will vent some of the pressures on wages and limit inflation, however.

In 2021, wages and benefits will rise by about 1 percent, and hourly compensation will increase modestly. Health insurance costs will be the primary force behind benefit cost increases. Faster productivity growth coupled with slow wage growth will cut unit labor costs by -0.5 percent, which will make American firms more competitive. Another implication of the decline in unit labor costs is that inflation should be well contained, which gives the Federal Reserve the latitude to keep short-term policy interest rates at zero and expand the size of its balance sheet.

Housing

Home sales and homebuilding will be very important drivers of GDP growth in 2021, mostly due to record low mortgage rates, cyclical factors, and demographic trends. For example, many millennials are reaching the age where they are ready to buy homes, especially in southern and western states where overall population growth is relatively strong. Due to Covid-19, however, many older homeowners are likely to stay put longer than originally planned, postponing their moves to retirement communities or assisted living facilities. As a result, there will be fewer existing homes for sale, so new home starts will increase by about 25 percent in 2021.

Existing home prices will continue to rise at a moderate 2.5 percent. As the record of home price appreciation lengthens, potential homebuyers who have been waiting on the sidelines are opting to become homeowners. In the coming year, the share of owner-occupied homes will rise and the share sold to investors will decline.

Prevailing mortgage rates are a tremendous bargain, and rates are expected to remain close to historically low levels through 2023. Rock bottom mortgage rates will be the strongest driver of the housing recovery. Lending standards will ease for homebuyers, so mortgages will be easier to obtain. Credit lines and money to builders will be more available as concerns about a double-dip recession ease, especially in the second half of the year. Supply constraints—the scarcity of developed lots and a shortage of lumber and skilled construction tradespeople—will continue to hamper the industry’s recovery, however. In addition, trade tensions, visa restrictions, past appreciation of the dollar, and weak foreign economies will reduce the number of foreign investors who want to buy homes here.

Another potential negative for homebuilding is the reduced rate of household formation, which never fully rebounded from the Great Recession. Job losses in 2020 forced many young adults to move back

in with family, or to stay at home a bit longer. The wind-down of many mortgage forbearance programs launched during the Covid-19 recession will put more foreclosed homes on the market in 2021, so home prices will not rise as quickly as before, but tight inventory means prices will not decline.

Nonresidential Construction

Spending for new nonresidential construction will continue to decrease. Low rents, high vacancy rates, and little or no absorption are powerful headwinds that will not overcome the tailwind generated by very low interest rates. Low yields and financial market volatility do make investors more interested in income-producing property as an asset class, but the risks are too high. In most markets, tenants will have the upper hand in lease negotiations. Credit conditions will tighten for builders, especially in markets with high vacancy rates. Even beyond the pandemic, trade tensions, dollar strength, and visa restrictions will dampen foreign investors’ interest in American real estate. There will be a few bright spots: spending will increase to build data centers, communications infrastructure, and warehouses.

Office and retail vacancy rates are already very high in too many markets and will continue to rise throughout 2021. The pandemic permanently accelerated the trend towards remote work, which will reduce office headcounts and the overall demand for office space. One counter trend, however, is that in post-pandemic America more space will be allocated to each office worker to allow for social distancing, so the demand for space probably will not decline as sharply. The overall effect, however, is likely to be less utilization of office space per dollar of GDP. Demand for new office space will be most resilient in lower-density urban and suburban markets, especially where high tech and healthcare industries are concentrated.

Even though consumers’ spending for goods recovered very quickly, retail is tremendously over-

built. The glut of retail space will sharply limit new retail construction, and financing will be very difficult to obtain. Competition from online retailers decreases the need to build more stores, but it will increase the need to build more distribution centers.

Due to fiscal constraints stemming from lower revenue collections, spending by state governments for publicly funded buildings will decline. Construction projects funded by local governments will fare somewhat better because most of the money comes from property and sales taxes. In 2021, property tax bases will continue to benefit from the upturn in residential real estate prices, and the reallocation of consumers’ expenditures from services towards goods has favored sales tax collections.

Spending for Equipment

Due to growth of end markets, technological advances, competitive pressures, and less regulation, businesses’ spending for equipment will increase by about 5 percent—or more if a medical solution to the virus is found quickly and/or if trade tensions loosen appreciably. As things stand, this type of spending will provide a good tailwind to GDP growth. The need to improve productivity and access to inexpensive credit will support such spending, but the combination of Covid-19 and the trade war creates too much uncertainty for capital spending to expand vigorously. Downside risks include delays in finding a medical solution to the virus, an escalation of the trade war, slower than expected recovery for oil prices, lower stock prices, and possible turmoil in the financial markets.

By historical standards, businesses’ capital spending has been very weak for a long time, and now there is a long-term need to increase spending on nonresidential fixed investment despite low levels of capacity utilization. In July 2020, the rate of capacity utilization in all industries was 71 percent, which was up from its low point of 64 percent in April 2020. Because this rate is well below its long-term aver-

age of 80 percent, capacity utilization alone will not spur capacity additions in 2021. For example, in July 2020, capacity utilization for industries producing rough goods was 75 percent, or 11 percent below its long-run average; for finished goods, it was 70 percent, or 7 percent below average.

Corporate Profits

Covid-19 hammered corporate profits, so earnings per share will not quickly return to pre-pandemic levels. The forecast for 3.5 percent inflation-adjusted GDP bodes well for a partial rebound in domestically generated corporate profits. In addition, unit labor costs are expected to decline slightly in 2021 due to poor labor market conditions, which is a tailwind. Very low interest rates will help profit margins, especially for debt-heavy and capital-intensive businesses. Expense management and moderate growth in demand for goods and services will help, too. Cash flow will increase, and financing should still be reasonably easy to obtain.

On the minus side, slow economic recoveries from Covid-19 in the EU and other developed economies will limit overseas earnings growth. In addition, past appreciation of the dollar will make it expensive for companies to convert earnings in foreign markets to dollars. The dollar's value will moderate only slightly in 2021, which will not provide much help to profit growth based on overseas earnings. Another problem is that businesses' pricing power will not be very strong because many companies will resist raising prices in order to lure back customers lost during the pandemic. Competition will be intense as companies struggle.

Some industries will not return to profitability in 2021. Air transportation, the cruise industry, and movie theatres are a few examples of industries where profits will be elusive, perhaps for many years. It is also important to note that financial institutions' profit margins will be severely constrained by a much flatter than normal yield curve.

International Trade

Uncertainty about Covid-19 as well as U.S. trade policy and tariffs adds considerable risk to the forecast for international trade. The Phase One trade deal suggests that trade tensions will not escalate, but will remain very high, nonetheless. In 2021, real exports and imports will grow at about the same pace, but imports and exports of goods will do better than imports and exports of services. The trade gap will be larger, too. In all, the main obstacles to faster U.S. export growth are Covid-19, the trade war, and past appreciation of the dollar. In addition, foreign GDP growth will be slower than U.S. GDP growth in 2021.

In the coming year, the dollar's value will be quite high, which limits prospects for American exports. The U.S. dollar probably will depreciate slightly in 2021, but that will be minor compared to the appreciation that has recently occurred.

Inflation and Monetary Policy

Consumer price inflation will increase by only 1.9 percent in 2021, which is above the 1.1 percent rate estimated for 2020. The main reason why inflation will be low is that the economy will be weak and not fully recovered from the Covid-19 recession. The Federal Reserve will keep short-term policy interest rates between zero and 0.25 percent in 2021. Moreover, many of the usual drivers of inflation will be lacking.

In 2021, labor market conditions will strengthen, but not nearly enough to support much inflation, much less ignite rapidly accelerating inflation. Indeed, employment will barely grow at all on an annual average basis. So, the Federal Reserve can continue very stimulative monetary policy without worrying too much about consumer price inflation gaining much traction in 2021, but it probably should be concerned about asset price bubbles.

The Federal Reserve will keep interest rates low for several years. In addition, it has increased the size of its balance sheet and will do so again in 2021, especially if long-term rates rise too much or if a double-dip recession develops.

Crude Oil Markets

If there are no significant supply interruptions or additional price premiums due to increased political tensions, it is likely that oil prices will be higher than in 2020 but will remain below the long-term equilibrium level of about \$55 per barrel. The global economic recovery is the main factor that will push oil prices higher. Another factor is restraint on the part of non-OPEC producers who will find it very difficult to obtain financing to boost production. Rig counts will be low in 2021, and OPEC producers are expected to take back market share from non-OPEC producers. Because oil markets are so volatile, a significant supply interruption would cause oil to trade significantly higher. As always, the major downside risk is global recession.

Productivity

Increases in productivity will be limited in 2021 because there has not been much capital deepening—adding more capital per worker—over the last decade. The uncertainties surrounding the coronavirus and international trade kept many businesses from spending for investment. More positively, social distancing and more emphasis on working from home encouraged businesses to invest more in labor-saving equipment and processes. The current surplus of workers, however, discourages employers from using staff more efficiently, which limits productivity growth.

Unfortunately, many of the long-term factors behind weak productivity growth may intensify. In the near future, we are likely to see higher overall federal tax burdens to help trim the national debt. That will limit productivity growth. Another problem is that slower gains in educational achievement contribute to sub-par productivity growth. We simply are not adding enough to human capital to generate average, or above average, productivity growth. Many state and local governments cut inflation-adjusted spending per student for both K-12 and higher education. Less public support for the nation's research universities

erodes our comparative advantage in innovation. Moreover, because public spending priorities appear to tilt more to supporting retirees rather than to educating students, access to higher education will continue to be more expensive. In general, a less liberal immigration policy is another limit, but not if more visas are granted to highly qualified individuals. ❖

The 2021 baseline forecast expects Georgia's economic recovery from the Covid-19 recession to continue. GDP and employment growth will quicken in the second half of the year because that is when we assume an effective vaccine is widely available.

The pandemic seriously damaged Georgia's economy. For example, the peak-to-trough drop in nonagricultural employment was 11.4 percent, which was much worse than the 8.2 percent drop during the Great Recession. The heaviest job losses were in the leisure and hospitality, air transportation, and textile mill products industries. But the Covid-19 recession's hit to Georgia's economy was not as hard as its hit to the national economy, so full recovery should be faster. For example, Georgia's 11.4 percent peak-to-trough job loss was smaller than the U.S. job loss of 14.5 percent.

State-specific forces that will sustain economic recovery through 2021 include: (1) the buildout of many projects in Georgia's economic development pipeline; (2) competitive state-level economic development incentives that help refill that pipeline; (3) more leverage than most states from higher housing sales and starts, and higher vehicle sales; (4) good prospects for Georgia's military bases; (5) less daunting fiscal challenges; and (7) growth-supportive demographic trends.

The 2021 forecast calls for Georgia's inflation-adjusted GDP to increase by 4 percent, which compares well to the 3.7 decline estimated for 2020. (This growth rate will be 0.5 percent higher than the 3.5 percent rate estimated for U.S. GDP.) Georgia's nonfarm employment will rise by 1.5 percent, which is above the 0.9 percent gain estimated for the nation. The state's unemployment rate will average 5.1 percent, or about 0.9 percent lower than the 6 percent rate estimated for 2020. Nominal personal income will grow 0.2 percent in 2021, which

is lower than the 5.2 percent gain estimated for 2020. The sharp slowdown in personal income reflects the winding down of federal stimulus programs that provided large transfer payments to individuals rather than slower growth of Georgia's economy. In contrast, the wage and salary-based personal income will grow faster in 2021 than in 2020.

The pattern of job growth across Georgia's industries will be different than it was before the pandemic. In 2021, several of the industries hit hardest by Covid-19—bars, restaurants, hospitality, tourism, movie theatres, live entertainment, air transportation—will post the fastest growth, but the high percentage gains reflect rebounds off very depressed levels rather than healthy recovery. Indeed, most of these same industries are the farthest from full economic recovery and some may never recover. In contrast, logistics, distribution, warehousing, professional and business services, the information industry, fin-tech, education, and health services will rebound, posting solid job growth in 2021. In addition, positive job growth will occur in manufacturing, financial activities, transportation, and utilities, but full recovery may take awhile. A strong housing market means that homebuilders will be hiring, but bleak prospects for commercial real estate markets mean that commercial construction firms will be laying off workers. Retailing and government are expected to lose jobs.

Services

Georgia's major categories of services-related businesses will expand, reflecting the upturn in housing markets, growing demand for healthcare, education, digital services, and high technology services, as well as a long list of economic development projects.

Fintech, transactions processing, data processing, cybersecurity, and development of software and mobile apps will continue to bolster the state's economic recovery. The

industry received a boost from the Covid crisis because contagion fears pushed people to adopt new mobile technologies, including mobile banking and touchless payment systems.

Georgia's fintech ecosystem is healthy, thanks to deep pools of experienced workers—and college graduates from the University System's Fintech Academy—with the necessary specialized talents. The list of companies that announced major projects includes Microsoft, Deluxe, Milletech Systems, Zillow, Perspecta, Medline Industries, Toyota Financial Services, Facebook, Accenture, and Honeywell, among many others.

The fintech cluster in the Atlanta MSA is burgeoning. For example, Deluxe will establish a new fin-tech and customer innovation center in Sandy Springs, creating over 700 jobs. Also, in 2020, Toyota Financial Services announced it will open a financial services center in Alpharetta that will be one of three national hubs and will create 150 jobs. Investment management company Invesco plans to add 500 jobs at its global headquarters in midtown Atlanta.

The Covid-19 crisis dramatically boosted the use of online and digital services, which increases the need for cyber security, an industry primarily located in Atlanta and Augusta. Talent is the key to Atlanta's success whereas the presence of the U.S. Army Cyber Command at Fort Gordon and Georgia Cyber Center are the foundations of Augusta's cyber security economy. Fort Gordon provides a critical mass of dependable contracts. For example, in 2020, Perspecta announced that it will open a regional office (with 178 jobs) at the Georgia Cyber Center to support the U.S. Army Cyber Command at Fort Gordon. In addition, cyber security tech provider Parsons Corporation plans to open a new office in the Georgia Cyber Center to train special operators for various units at Fort Gordon.

Healthcare IT and telemedicine will create thousands of high-paying jobs in Georgia over the next decade.

The Covid crisis greatly accelerated the adoption of telemedicine by traditional healthcare providers, to which many people became accustomed. Once the pandemic is over, it is likely that many patients will continue to use online healthcare, which is good for healthcare providers and healthcare IT companies. For example, BioIQ—a healthcare IT company—announced last year that it would create 500 jobs at its new headquarters in Cobb County. Edifecs Inc. plans to create 200 healthcare IT jobs over the next five years in Atlanta. Animal healthcare is also a source of economic growth. Boehringer Ingelheim, which has located its North American headquarters in Duluth, will create over 225 jobs in Gwinnett, Clarke, and Hall counties.

The fast rollout of telemedicine by many traditional healthcare providers made the healthcare industry more resilient than most other industries, so its outlook for is very good. Regardless of the vicissitudes of the business cycle or healthcare policy, the population of people with

multiple chronic health conditions that require ongoing care continues to grow. Of course, there’s seemingly intractable disagreement about who will pay the bills, which is a headwind for the industry’s growth. Uncertainties about the long-term viability of the ACA as well as Georgia’s nonparticipation in the expanded Medicaid program cloud the outlook, especially for rural hospitals.

The buildout of headquarters projects announced over the last several years will be an important force in the state’s economic growth. Several headquarters projects were announced in 2020. Common said it would establish a second headquarters in Atlanta, creating 274 jobs. Papa John’s chose Georgia as the location of its new global headquarters, bringing 200 jobs to the Atlanta MSA. In addition, projects announced in previous years—such as Norfolk Southern Railway’s relocating its corporate headquarters to Atlanta—will spur growth as they build out more fully.

Hartsfield-Jackson Interna-

tional Airport and Georgia’s ideal geographic location makes the state a good hub from which to serve operations in the Americas. In addition, access to talent and the strength of the business community are very important drivers of headquarters locations in the Atlanta MSA. According to FEMA, Georgia has a very low risk for business disruption due to natural disasters, which is an important consideration for headquarters locations. Thirty companies with headquarters in the Atlanta MSA rank among the 2020 Fortune 1000, placing Atlanta behind only New York City and Houston among U.S. metros headquartering Fortune 1000 companies.

Factors that will encourage providers of high-tech and highly specialized professional services to favor sites in Georgia (especially the Atlanta area) include the good business climate, logistical advantages in terms of serving far-flung clients, and the available professional workforce. One example is the Boston Consulting Group’s new regional support

GEORGIA’S BASELINE FORECAST, 2020-2021

Georgia	2016	2017	2018	2019	2020	2021
Gross Domestic Product, Bil of 2012\$	498.3	516.6	529.0	539.5	519.6	540.4
Percent change	3.5	3.7	2.4	2.0	-3.7	4.0
Nonfarm Employment (thousands)	4,371.4	4,452.6	4,535.9	4,613.8	4,429.6	4,497.3
Percent change	2.6	1.9	1.9	1.7	-4.0	1.5
Personal Income, Bil of \$	439.9	463.8	489.0	511.7	538.4	539.4
Percent change	3.7	5.4	5.4	4.7	5.2	0.2
Housing Permits, Total	51,675	51,240	59,315	53,823	50,500	59,000
Percent change	13.4	-0.8	15.8	-9.3	-6.2	16.8
Unemployment Rate (percent)	5.4	4.7	3.9	3.4	6.0	5.1

Source: The Selig Center for Economic Growth, Terry College of Business, The University of Georgia, October 2020.

center in Atlanta that will serve clients throughout the Southeast. The plethora of short- and long-term changes created by the pandemic will generate business for consulting firms. In addition, business services that provide necessities should do well in 2021.

Assuming that the trade war does not intensify, the prospects for Georgia's transportation and logistics industry are good. One driver will be the abundance of logistics and distribution projects already in the economic development pipeline. This highly cyclical industry also will benefit from more spending by consumers, increases in industrial production, more homebuilding, population growth, improvements in Georgia's transportation infrastructure, and the state's growing role as a regional and national logistics and distribution center. The accelerated shift from physical retail to online retail will help, too.

Many of the major distribution and logistics project announced in

2020 will be building out in 2021. Home Depot announced that it will open three new warehousing facilities, creating 1,000 jobs in the metro Atlanta area. Georgia is the hub for Home Depot's supply chain operations for the Southeast and the company will continue to benefit from homeowners' heightened interest in home improvement projects.

Other major projects underway include Amazon's fulfillment centers in Columbia County (with 88 jobs) and in Coweta County (with 500 jobs); Hello Fresh's distribution center in Newnan that will employ 750; and Lidl's regional distribution center in Covington that will bring 270 jobs. In addition, Bang Energy will base its first Southeastern manufacturing and distribution facility in Lithia Springs, creating 600 jobs.

Last year, *Business Facilities Magazine* ranked Georgia as the top state for motion picture and TV production, and before the pandemic, the state was slated to have a record-setting year in film produc-

tion. Unfortunately, Covid-19 shut everything down for several months and although the industry is slowly coming back, it is unlikely to regain its footing until 2022.

Direct spending by Georgia's film industry was \$2.9 billion in 2019. In 2018, it ranked third to California and New York in the production of all feature films. State incentives help to ensure that nearly all studio space is booked. Georgia's diversity of locations also provides a good fit for a wide range of film and TV productions.

Covid-19 has hammered the financial services sector as unemployment and business closures forced many to miss loan and mortgage payments. Banks responded by adding aggressively to their loan loss reserves. Large numbers of missed payments can lead to bank failures, but it will help that most banks were exceptionally well capitalized when the pandemic began. Due to a favorable combination of high levels of capitalization, aggressive and timely

GEORGIA'S GROSS DOMESTIC PRODUCT, 2010-2021 (millions of dollars)

Year	Current \$	Constant (2012) \$	Percentage Change from Previous Year	
			Current \$	Constant (2012) \$
2010	416,883.8	433,027.3	2.4	1.6
2011	429,574.0	439,890.5	3.0	1.6
2012	444,132.2	444,132.2	3.4	1.0
2013	460,585.1	450,771.8	3.7	1.5
2014	485,816.7	465,646.0	5.5	3.3
2015	513,565.6	481,575.7	5.7	3.4
2016	539,525.1	498,266.8	5.1	3.5
2017	566,473.6	516,593.9	5.0	3.7
2018	592,153.4	528,998.9	4.5	2.4
2019	616,333.3	539,536.3	4.1	2.0
2020	597,843.3	519,573.5	3.0	-3.7
2021	628,333.3	540,356.4	5.1	4.0

Source: Data through 2018 obtained from the Bureau of Economic Analysis, U.S. Department of Commerce. Data for 2020-2021 are from the Selig Center for Economic Growth, Terry College of Business, University of Georgia, October 2020.

intervention by the by the Federal Reserve, and Congressional actions that helped mitigate financial risks, relatively few bank failures are expected in the wake of this pandemic. As forbearance policies wind down in early 2021, however, additional credit problems almost certainly will emerge.

Above-average population growth and the upcycle in residential real estate will help Georgia’s financial institutions, but poor prospects for commercial real estate will counter the gains. Similarly, rising home prices favor banks’ top- and bottom-line growth, but declines in commercial property prices will hurt banks. The prospects for deposit growth are good, but an almost flat yield curve will limit financial institutions’ ability to profit from borrowing short and lending long.

Higher demand for many types of loans will support Georgia banks’ profits. Households’ credit scores are at decent levels and are not expected to deteriorate too much more, as-

suming that double-dip recession is avoided. Higher consumer spending should ensure growth of non-revolving credit to households, but banks will tighten lending due to rising delinquencies.

Banks adapted to Covid-19 by accelerating the use of digital banking products as well as streamlining processes, which increases productivity, resilience, and competitiveness. That should help traditional banks and credit unions cope with more competition from large retailers, venture capital funds, microfinance, and other nonbanks. These nontraditional competitors are not as heavily regulated as traditional banks or savings and loans, which gives them an advantage. Mobile banking will transform banking into a much more customer-focused business, which could be an advantage for technology firms—or online retailers—that invade markets currently served by banks.

The high-contact hospitality industry was hit extremely hard by the

pandemic, and although lodging demand will rise substantially in 2021, it may take many years for the industry to fully recover. Still, there are some positive prospects amid all the uncertainty. First, leisure travel will recover much faster than business travel. Short trips by car will rebound faster than long trips by air. Second, domestic travel will come back much faster than international travel. Third, prospects for the lodging industry vary by property type, with economy and midscale properties doing best. Finally, properties located in the suburbs, small metros, or on interstates will outperform properties located in major cities or at resorts.

Manufacturing

Industrial production is slated to increase more quickly than GDP, although productivity gains will curtail the increase in manufacturing jobs. The recovering global demand for manufactured goods is the main impetus, but there’s also a need to restock stores and warehouses. Co-

NEW RESIDENTIAL BUILDING UNITS AUTHORIZED FOR GEORGIA, 2010-2021

Year	Total New Residential	Percent Change from Previous Period	New Single-Unit Residential	Percent Change from Previous Period	New Multi-Unit Residential	Percent Change from Previous Period
2010	17,265	-5.3	14,779	0.7	2,486	-30.1
2011	18,493	7.1	13,817	-6.5	4,676	88.1
2012	24,350	31.7	17,297	25.2	7,053	50.8
2013	36,174	48.6	24,810	43.4	11,364	61.1
2014	39,423	9.0	27,503	10.9	11,920	4.9
2015	45,549	15.5	32,621	18.6	12,928	8.5
2016	51,675	13.4	36,481	11.8	15,194	17.5
2017	51,240	-0.8	40,311	10.5	10,929	-28.1
2018	59,315	15.8	42,287	4.9	17,028	55.8
2019	53,823	-9.3	42,939	1.5	10,884	-36.1
2020	50,500	-6.2	42,000	-2.2	8,500	-21.9
2021	59,000	16.8	50,000	19.0	9,000	5.9

Source: The Selig Center for Economic Growth, Terry College of Business, The University of Georgia, October 2020.

vid-19 is the main downside risk, but an escalation of the U.S.-China trade war also could endanger the projected increases in industrial production. More positively, Georgia saw many manufacturing economic development projects announced in 2020 and those projects will continue to materialize, contributing to the increase in industrial production expected in 2021.

Georgia's manufacturing sector is cyclically sensitive and depends heavily on international supply chains and export markets. In most years, Georgia manufacturers' focus on export markets works to the state's advantage economically. For example, Georgia's exports surged to over \$41.2 billion in 2019, up 2 percent from 2018. It is the nation's twelfth largest exporting state and its top five markets are Canada, Mexico, Germany, China, and Singapore.

Food processing—the largest manufacturing industry—fared relatively well during the pandemic but had to accommodate to higher sales to grocers and lower sales to restaurants and institutions. Production will increase substantially in 2021 as companies such as Anheuser-Busch, Sugar Bowl Bakery, Kerry Group, Batter Up Foods, Frito Lay, and General Mills ramp up.

Georgia's vehicle parts manufacturing industry will benefit from higher domestic demand for vehicles. Political pressures that encourage foreign manufacturers to invest more in American production facilities and to buy automotive parts from U.S. manufacturers will help. In addition, there are more assembly plants in the Southeast now, and bolstered growth will come from companies such as GEDIA Auto Group, SK Innovation, Hitachi Automotive Systems, and Toyo Tire North America, among others.

Effective economic development policies, low utilities prices, rising wages and production costs in China—and other overseas locations—all support Georgia's manufacturing sector. Concerns about trade policies, product quality, and management of the risks associated with complex supply chains also make manufacturing in Georgia more at-

tractive than manufacturing overseas. Additional helpful factors include a superior transportation, logistics, and distribution infrastructure, low costs of doing business, a favorable tax structure, and very competitive economic development incentives.

State and Local Government

Before the pandemic, the state prepared for a substantial slowdown in revenue collections by cutting its budget for FY 2020 and 2021. The timely cuts helped to reduce the fiscal impact of the Covid crisis on the state's economy. Nonetheless, budget cuts reduced state government employment in 2020 and will do so again in 2021, so state government will not contribute to 2021 GDP or employment growth.

In addition to short-term cyclical challenges created by the pandemic, several long-term fiscal challenges loom. The biggest challenge for state government financing is uncertainty about federal funding for mandated programs, especially Medicaid. Mandatory spending on Medicaid is crowding out spending on K-12 education, higher education, and infrastructure, three spending areas essential to boosting—or even maintaining—Georgia's competitiveness.

The second challenge is an antiquated tax structure that is not aligned with the state's shifting economic structure. Consequently, when Georgia's economy expands, state taxes do not generate as much revenue as it did in the past, and this slowdown in revenue growth is unlikely to go away without comprehensive tax reform. For example, Georgia's sales and use tax depends very heavily on the sales of goods and exempts many services. Over time, that is a problem because consumer spending has shifted away from taxable goods and towards tax-exempt services. In addition, goods-price inflation generally has been much weaker than service-price inflation.

Pension liabilities and state retiree healthcare costs are the third and fourth biggest long-term fiscal challenges. Unfortunately, these will exacerbate the effects of the next recession on the state's ability to

sustain essential needs such as public safety, education, and infrastructure.

In 2021, the fiscal situation facing most local governments will be better, although local government employment and programs will not expand much. Compared to state government, however, local governments depend very heavily on property taxes and fees for services and less on sales and income taxes. Due to the strength of housing markets, most local governments will quickly reconcile their ability to generate revenue with their spending and staffing levels. Residential real estate prices probably will rise by about 3 percent in 2021. Assessed residential property values will increase even more than 3 percent because such values tend to lag market prices by a year or more. In 2020, there also was heavy spending for major home improvement projects (e.g., swimming pools) that will add to 2021 residential property tax digests. In addition, new home construction will be on the upswing, which will lead to the expansion of property tax bases. Less positively, commercial real estate prices will drop, and the decline could be steep in some markets.

Federal Reserve Policy

The pivot in Federal Reserve policy from a slightly restrictive to an extremely accommodative stance gives Georgia a slightly stronger economic push because Georgians carry relatively more debt and have relatively less savings, so lower interest rates are a big help. In addition, interest-sensitive economic sectors (e.g. real estate development, home building, nonresidential construction, building materials manufacturing, and forestry) have a greater impact on Georgia's overall growth than on the nation's in general.

Economic Development

Despite Covid-19, Georgia's economic developers landed more projects in fiscal year 2020 than in the previous year. In fact, nine of the ten largest projects announced in the first three quarters of 2020 happened after the shutdown began.

Georgia is viewed as a place where there is a good working

GEORGIA'S BASELINE EMPLOYMENT FORECAST, 2020-2021

Georgia	2016	2017	2018	2019	2020	2021
Nonfarm Employment¹	4,371.4	4,452.6	4,535.9	4,613.8	4,429.6	4,497.3
Total Private	3,691.5	3,768.4	3,845.7	3,923.5	3,749.6	3,830.2
Goods Producing			577.1	592.1	609.5	618.9
Mining and Logging	594.1598.7					
Construction	9.5	9.5	9.5	9.4	9.0	9.1
Manufacturing	179.8	186.7	195.5	203.4	199.3	201.9
	387.7	396.0	404.5	406.1	385.8	387.7
Services Providing						
Trade, Trans., Utilities	3,794.3	3,860.4	3,926.4	3,994.9	3,835.5	3,898.6
Information	902.1	915.2	931.3	944.0	935.5	939.2
Financial Activities	113.4	118.5	114.8	117.0	107.2	109.3
Professional and Business Services	236.9	241.0	245.8	250.2	245.4	247.4
Education and Health Services	673.7	690.8	706.2	716.0	677.3	700.4
Leisure and Hospitality	564.4	573.8	588.2	610.3	612.1	621.3
Other Services	466.6	478.6	489.3	502.1	424.3	448.0
Government	157.3	158.3	160.4	165.0	153.6	165.8
	679.9	684.2	690.2	690.4	680.0	667.1
Percent Change						
Nonfarm Employment	2.6	1.9	1.9	1.7	-4.0	1.5
Total Private						
Goods Producing	3.0	2.1	2.1	2.0	-4.4	2.1
Mining and Logging	3.7	2.6	2.9	1.5	-4.0	0.8
Construction	4.4	0.0	0.0	-1.1	-4.5	1.1
Manufacturing	5.9	3.8	4.7	4.0	-2.0	1.3
	2.6	2.1	2.1	0.4	-5.0	0.5
Services Providing						
Trade, Trans., Utilities	2.4	1.7	1.7	1.7	-4.0	1.6
Information	2.2	1.5	1.8	1.4	-0.9	0.4
Financial Activities	0.5	4.5	-3.1	1.9	-8.4	2.0
Professional and Business Services	1.6	1.7	2.0	1.8	-1.9	0.8
Education and Health Services	3.3	2.5	2.2	1.4	-5.4	3.4
Leisure and Hospitality	3.8	1.7	2.5	3.8	0.3	1.5
Other Services	4.1	2.6	2.2	2.6	-15.5	5.6
Government	1.0	0.6	1.3	2.9	-6.9	7.9
	0.5	0.6	0.9	0.0	-1.5	-1.9

¹Indicates thousands of workers.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, October 2020.

relationship between state and local governments and other major players. Government is responsive to the needs of businesses, ranking very high in terms of its regulatory environment and speed of permitting. The available supply of skilled labor attracts businesses, especially in the Atlanta MSA. The state also established 17 HOPE Career Grant areas of study to better align college students' fields of study with companies' workforce needs. Those factors plus major transportation and logistical advantages and a competitive tax climate make Georgia the top state in which to do business.

Among large economic development projects announced in 2020 are: Microsoft's new facility in Atlanta that will create 1,500 new high-tech jobs; Home Depot's three new warehousing facilities in the Atlanta MSA, creating about 1,000 new jobs; Zinus USA's first North American advanced manufacturing facility in McDonough, creating over 800 jobs; Amazon's fulfillment center in Columbia County, creating 800 jobs; and Fortune 1000 company Deluxe's new fin-tech innovation center and office complex in Sandy Springs that will create over 700 jobs. In addition, SK Innovation announced that it would expand its lithium-ion manufacturing plant in Commerce, creating 600 new jobs. This project is in addition to the manufacturing facilities the company is building in Jackson County (announced in late 2018) that will support 2,000 jobs.

Another reason Georgia will do well in 2021 is that the U.S. automobile manufacturing industry is increasingly concentrated in the Southeast. When it comes to both distribution and consumer markets, Georgia is in the sweet spot in the middle of the Southern Auto Corridor with proximity to major assembly plants and suppliers, interstates, ports, and rail. In 2020, SK Innovation will build a battery manufacturing plant in Jackson County that will create 600 jobs. In a closely related move, Enchem announced that it will build two new manufacturing plants in Jackson County, creating over 300 jobs.

Due to cost, logistics, and tax

advantages, Georgia is very competitive in landing economic development projects. Many companies move here to take advantage of no sales and use taxes on energy used in manufacturing, and a well-trained workforce. Logistics, transportation, distribution, warehousing, information technology, cybersecurity, transactions processing, headquarters operations, floor coverings, automotive parts, food processing, and professional and business services are good examples of industries where Georgia competes effectively.

Housing Market Conditions

Despite Covid-19, Georgia's homebuilding industry is likely to rise higher in 2021. Sales of new and existing homes, permits to build new homes, and home repair and renovation activity will increase. Jumps in demand for housing will stem from low mortgage rates, low inventory of homes for sale, job growth, and population growth. In addition, investors will be active.

The number of single-family home starts will increase by 19 percent and new multi-unit homebuilding will increase by 6 percent. Georgia gets a five for one from the housing recovery because homebuilders and realtors benefit directly and demand increases nationally for goods produced by Georgia's large floor covering, building materials, and forestry industries. The state's large transportation and logistics industry also benefits from higher levels of activity in construction, which is transportation intensive. In addition, recent and continuing increases in U.S. home prices will make it even easier for companies and people to relocate to Georgia. Finally, the home equity generated via home price appreciation will boost small business formation and expansion as well as consumer spending.

As of mid-2020, Georgia's existing home prices were 23 percent higher than prior to the Great Recession's peak. The degree of home price recovery varied widely within the state, however. For example, on average, existing home prices in the Atlanta MSA were 29 percent higher than their pre-Great Recession peak

level while it was only 8 percent higher in rural Georgia. Home price appreciation will continue through 2021, but home prices will rise more slowly. We expect the price of the average existing single-family home to rise by 3 percent in the coming year.

There some negatives. In 2021, fears of a double-dip recession and supply-side constraints will continue to limit housing sales. Inventories of new homes are still constrained by years of underbuilding, a shortage of lots, and a scarcity of construction workers. In addition, listings of existing homes are scarce, and it is especially acute for the least expensive homes. ♦

From peak-to-trough, the Atlanta MSA lost 11.7 percent of its jobs to the Covid-19 recession, but recovered 47 percent of its losses in the initial three-month rebound. The heaviest job losses were in the air transportation, leisure and hospitality, and transportation equipment manufacturing sectors. Still, Atlanta's recovery from the virus crisis will outpace nation's recovery and will essentially pace that of the state as a whole, driven by business development, an educated workforce, innovation, above-average population growth and strong housing markets.

In 2021, the pace of job growth will be 1.7 percent, which is almost double the 0.9 percent gain expected for the nation. The area's leading high-wage industries include computer systems design, management of companies and enterprises, and offices of physicians. Leading mid-wage industries include general medical and surgical hospitals and building equipment contractors. The low-wage leaders are restaurants, employment services companies, and grocery stores.

In order, the Atlanta MSA's top ten employers are Emory University/Emory Healthcare, Delta Air Lines, Home Depot, Northside Hospital, Piedmont Healthcare, Publix Supermarkets, WellStar Health Systems, the Kroger Company, AT&T, and UPS.

The MSA is dependent on two highly cyclical industries—distribution and new construction—both of which will outperform the overall economy in 2021. Exports account for about 6.3 percent of the area's GDP, so the MSA is not overly dependent on export markets. Its main weakness, however, is an overburdened infrastructure.

Atlanta has many high-tech jobs—5.9 percent of total employment in the Atlanta MSA versus 4.4 percent for Georgia and 5 percent for the nation. In 2021, the area's high concentration of college-educated workers, business partners, cyberse-

curity, high-tech companies, innovation centers, and research universities will continue to attract high technology companies in life sciences, software development, R&D, healthcare IT, and advanced manufacturing.

The CDC and nonprofits such as the national headquarters of the American Cancer Society and the Arthritis Foundation attracts life sciences companies. New high-tech development continues to grow thanks to easy access to major universities, especially university research centers that transfer new ideas and technologies to local businesses. For example, the innovation district that developed around Tech Square has achieved the critical mass needed to attract high-tech companies—and venture capital—to Midtown Atlanta.

In 2020, Microsoft announced that it will open a new AI and cloud services facility in West Midtown that will create 1,500 new jobs. Enterprise solutions and software company Milletech Systems Inc. will move its entire operation to Georgia, creating 465 jobs in Fulton County. Zillow announced that it will make Atlanta its Southeastern hub, bringing almost 200 jobs to the Atlanta MSA. Locales outside the city are capitalizing on this growth, too. For instance, Fortune 1000 company Deluxe will establish a new fin-tech and customer innovation center in Sandy Springs, creating 709 new jobs. Similarly, Toyota Financial Services will establish a fin-tech operations hub in Cobb County that will create 150 jobs. Cobb County also will become the home to the North American headquarters of Skynamo, a field solutions software company.

Compared to other large metropolitan areas with strong links to global markets, the costs of living and doing business in the Atlanta MSA are low, and many companies are attracted by Atlanta's large and diverse pool of workers. In addition, the high concentration of colleges and universities ensures a large supply of experienced faculty, newly minted college

graduates, and student interns. Less positively, stricter issuance of H-1B and H4 visas limits Atlanta's ability to attract international talent, which is a headwind for high-tech industry growth.

On an annual average basis, the 29-county Atlanta MSA will add 46,500 jobs in 2021, a year-over-year increase of 1.7 percent that will outpace the state's. It also helps that Atlanta has a high concentration of service-producing industries, IT companies, distribution companies, e-commerce fulfillment centers, universities, health care providers, life sciences companies and headquarters operations.

Covid-19 turned the area's high dependence on air transportation into a negative economic factor in 2020, but planned improvements at Hartsfield-Jackson International Airport bode well for Atlanta's future growth. Production sites and cold storage facilities near the airport appeal to manufacturers of perishable biomedical products that require special shipping. Lightweight, highly perishable, or time-sensitive products are well suited to air transporta-

tion, so many high-tech production companies consider the extensive air cargo facilities at Hartsfield-Jackson to be essential to their operations. The airport also makes Atlanta an excellent hub from which to manage operations or provide business services to a global client base.

Before the pandemic, Atlanta was the sixth most-visited city by U.S. travelers—behind only Orlando in the South. That high ranking was mostly due to the meetings and convention industry, which focused primarily on business travelers, and as we know, that became a major deterrent to growth in 2020.

The MSA is highly specialized in transportation, logistics, warehousing, and wholesale trade, with employment concentrated these inherently cyclical industries. The continued growth in U.S. and global GDP in 2021 will support these industries and Atlanta's economy in turn. Large projects announced in 2020 include Home Depot's three new warehousing facilities in DeKalb, Fulton, and Henry counties, Hello Fresh's distribution center in Newnan, and Amazon's 500-job ful-

fillment center in Coweta County.

Given the federal budget situation, one major long-term plus for Atlanta is that the metro area is not very dependent on federal government jobs. The MSA's only sizable federal employer is the CDC (with about 9,200 employees). Atlanta is not the home of a major military base. Federal, state, and local government jobs combined account for only about 12 percent of total employment metro Atlanta versus 15 percent for the state and the nation, so public-sector restructuring should be less of a problem.

Above-average growth in employment and population means the housing market here is stronger too. As of mid-2020, Atlanta's home prices were 29 percent above their pre-Great Recession peak. The most recently posted year-over-year price increase—between 2019 Q2 and 2020 Q2—was 4.2 percent. In 2021, home prices will continue to increase, but the rate of home price appreciation will not. In all, Atlanta's 2021 homebuilding outlook is positive, but not robust. ♦

Albany

From peak-to-trough, the Albany MSA lost 9.7 percent of its jobs to the Covid-19 recession, but recovered 14 percent of its losses in the initial three-month rebound. In 2021, the MSA's economy will grow more slowly than the state's, which mostly reflects pre-pandemic growth trends. Nonetheless, Albany has less economic wreckage to clear. On an annual average basis, the area is expected to add 400 jobs (a 0.6 percent increase). The completion of Georgia-Pacific's new lumber production facility—and its 140 jobs—will be a big boost.

The Albany MSA, which includes Baker, Dougherty, Lee, Terrell, and Worth counties, is home to top employers Phoebe Putney Health Systems, the Marine Corps Logistics Base, Procter & Gamble,

Albany State University, and Miller Brewing Company. The area's leading high-wage industries include the federal government, doctors' offices, and converted paper product manufacturing. The leading mid-wage industries include general medical and surgical hospitals, architectural and engineering services, and building equipment contractors. Low-wage industries encompass local government, restaurants, state government, and farms.

Compared to the state and the nation, the local economy is more dependent on government, retailing, health care, and agriculture. These industries suffered less than many others during the virus crisis, which limited jobs losses in Albany. It is relatively less dependent on information services, financial activi-

ties, manufacturing, and educational services and has very few high-tech jobs. Increased defense spending will benefit the area as will higher spending on health care, but retail jobs will continue to decline. Within manufacturing, Albany is much more focused the production of nondurable goods, which helped during the pandemic because sales of nondurable goods are less cyclical than sales of durable goods. Consequently, activity in Albany's manufacturing sector is relatively stable because it produces basic consumer staples, which people continue to buy no matter what,

Albany's strengths include low business and living costs and low employment volatility. In addition, Albany is a regional transportation hub. The area's weaknesses include low educational attainment of the

workforce, few high-tech jobs, low per capita incomes, weak demographic trends, and a high poverty rate. Population outmigration and weak household formation have hurt consumer industries, including retailing, homebuilding, and real estate development.

Albany's assets include a low cost of living and doing business, an excellent telecommunications infrastructure, major highway access, the Marine Corps Logistic Base, a major state college, an excellent technical college, the new 4C Academy, and a reputation as a good place to live.

Albany's role as a regional center for healthcare weighs strongly in its favor, but the MSA's sub-par population growth as well as Georgia's nonparticipation in the expansion of Medicaid limits the prospects for this industry's growth. To prosper, Albany's healthcare industry will have to pull many more patients from surrounding areas. The new Lee County Medical Center, slated to open in late 2020 or in 2021, should support several hundred jobs, but many of these represent business/patients that transferred from incumbent healthcare providers and therefore will not be net new jobs. In addition, the MSA continues to benefit from

its traditional role as a support center for agriculture, but high dependence on agriculture makes it vulnerable to trade tensions as well as vicissitudes of the weather, commodity markets, and federal farm policies.

Redevelopment along the Flint River adds to Albany's charm, and adds to the area's potential to benefit from tourism and retiree-based development. The leisure and hospitality industry should expand in 2021, but the gains will be off a very depressed base. The Rails to Trails project and the new airport terminal also will help the tourism industry.

A high proportion of government jobs makes Albany vulnerable to the restructuring of government, however, and the presence of the Marine Corps Logistics Base makes the MSA very dependent on federal jobs. The base is the area's top employer and immediate prospects are good because DOD spending probably will increase in 2021. Future problems with the federal budget are looming, however, which is a long-term risk for the area's economy. Moreover, since state and local government also account for higher percentages of earnings, additional public restructuring at any level of

government will be a problem for Albany's long-term growth.

Another serious problem is that the area's population and labor force have been declining for many years. In addition, compared to the Georgia average, Albany has relative fewer people within the 25-to 49-age bracket, typically the most productive years, professionally. The MSA's relatively low earnings and a scarcity of high-tech jobs push residents to look elsewhere for jobs. Net migration has been negative and it is likely to remain so in 2021.

Home prices are recovering much more slowly, too. As of the second quarter of 2020, Albany's home prices were still 4 percent below their pre-Great Recession peak, but were up 1.7 percent on a year-over-year basis. The failure of home prices to recover will restrain entrepreneurial activity and the growth of consumer spending, especially spending on home improvements. Job losses, weak demographic trends, and an adequate supply of existing homes means that Albany's contractors won't build many new homes in 2021. Very low mortgage rates will help limit decreases in homebuilding activity, however. ♦

Athens

The Athens MSA lost 9.7 percent of its jobs to the Covid-19 recession, with the heaviest losses occurring in state government, leisure and hospitality, and goods production. In the initial three-month rebound, the MSA recovered 54 percent of its job losses, which was roughly on par with the rebound posted by the state as a whole and stronger than the rebound posted by the nation.

The economic structure of the MSA—which includes Clarke, Madison, Oconee, and Oglethorpe counties—tilts towards higher education and healthcare. The local economy is not heavily dependent on manufacturing, construction, transportation and logistics or exports. In short, Athens' economy is fairly stable,

thanks to population growth, a highly educated workforce, the innovation ecosystem, low business and living costs, and proximity to Atlanta.

Over the last two years, Athens landed several large economic development projects, which improves its prospects for growth. In 2020, biotech company RWCD Industries announced that it would expand its local operations, creating 200 jobs. (The company was founded at a UGA innovation lab in 2015.) Boehringer Ingelheim announced that it would expand its existing footprint in Athens, creating over 100 new jobs at its manufacturing and research and development facility. The company is a leader in veterinary healthcare. Also, online home goods retailer

Wayfair will create 500 jobs in its Athens call center.

The proximity to and high economic integration with the Atlanta MSA work to Athens' advantage, as illustrated by commuter flows between the two MSAs: 7.4 percent of jobs held by Athenians are located in Atlanta, and people commuting from Atlanta occupy 9.5 percent of Athens' jobs.

Weaknesses include the lack of interstate-quality highways, low economic diversity, a relatively narrow base of job growth, low per capita income, and a shrinking manufacturing industry. The area's largest employers are the University of Georgia, the Athens Regional Medical Center, St. Mary's Hospital, Caterpillar,

Pilgrim's Pride Corporation, Athens Technical College, Power Partners, Dial America, Baldor Dodge Reliance, and Carrier Transicold. Leading high-wage industries include doctors' offices and pharmaceutical and medicine manufacturing. Mid-wage leaders include local government, general medical and surgical hospitals, and animal slaughtering and processing. State government, restaurants, and grocery stores lead the low-wage group.

In 2021, employment in Athens will increase by 0.7 percent (about 600 jobs), well below the 1.5 percent growth expected for the state. Factors that dim UGA's (and Athens') immediate prospects for job growth include no increases in state appropriations for higher education and no rise in tuition. Although students have returned to campus, they are not spending as much as usual. Moreover, many UGA-related events are taking place virtually, so there are no crowds spending money locally.

The outlook for healthcare services is very good, however. Piedmont Athens Regional Medical Center is rated as high performing in four adult procedures and conditions. Recently, St. Mary's hospital was designated Georgia's large hospital of the year. The establishment

of the 56-acre UGA Health Sciences Campus in partnership with Augusta University will encourage further development of clinical healthcare and the biomedical industry and will help to extend healthcare into rural areas.

The University of Georgia is the MSA's economic driver, and its College of Engineering contributes directly to the region's growth through its entrepreneurial development and the climate for innovation. It helps Athens recruit high-tech companies and venture capital. UGA is top in the nation for the number of new products brought to market based on university research and fourth among U.S. universities for the number of new intellectual property licenses to industry.

Meanwhile, the hospitality industry continues to shrink during the pandemic despite convention space improvements to the Classic Center. But the longer-term prospects are still very good, especially since Athens is an affordable regional entertainment hub known for its music and dining scene, and college sports.

Beyond Covid-19, there are some other challenges to growth. The economy is not very diversified. Athens is extremely dependent on government jobs, especially state government due to the presence

of the University of Georgia. High dependence on state spending is an advantage when revenues are high, but can be a disadvantage when they are not. In contrast, the information, professional and business services, construction, transportation, and manufacturing industries are under-sized relative to the overall size of the area's economy. That will limit the impetus to the region's overall growth from these industries. Another concern is that Athens' role as a major regional hub for retail shopping has been declining for many years and will remain under assault in 2021.

The single-family homebuilding industry's prospects for 2021 are good, but not great. Construction of multi-family units decreased recently and is unlikely to increase in the coming year. Because Athens is a college town, millennials and renters play an outsized role in the area's housing market, 41 percent of which is renter occupied.

In the second quarter of 2020, the prices of existing homes in the Athens MSA exceeded their pre-Great Recession level by 29 percent. The year-over-year percentage increase in home prices was a very strong 7.2 percent, and the rise will continue through 2021. ❖

Augusta

From peak-to-trough, the Augusta MSA lost 10.2 percent of its jobs to the Covid-19 recession. The heaviest job losses were in the hospitality, information, other services, and professional and business services industries. But now Augusta has recovered 45 percent of its job losses, which was on par with the rebound posted by the nation as a whole.

In 2021, Augusta's employment is expected to increase by 2,800 jobs. The 1.2 percent pace of job growth expected will be lower than the 1.5 percent pace estimated for the state, but it will exceed the 0.9 percent gain forecast for the nation. It helps that a good many of these new jobs will be high-skill, high-paying ones.

The buildout of the U.S. Army Cyber Command, the recent opening of the Georgia Cyber Training and Innovation Center, the area's focus on clinical healthcare, and higher education are major positives. In addition, the local economy is not very dependent on exports (3.8 percent of GDP) and thus not overly vulnerable to trade shocks.

Augusta's economy will benefit from the continuation of the controversial construction of two nuclear power plants at Plant Vogtle. Augusta also is a center for telecommunications services and call centers, and a major hub for the life sciences industry. The area's leading high wage industries include the federal

government, doctors' offices, waste treatment and disposal services, and architectural and engineering firms. Leading mid-wage industries include the military, local government, and state government. Leading low-wage categories include restaurants, general merchandise stores, and grocery stores. The Augusta MSA includes Burke, Columbia, Lincoln, McDuffie, and Richmond counties in Georgia and Aiken and Edgefield counties in South Carolina.

Fort Gordon adds substantially to the Augusta's prospects for growth, too. In addition to the direct creation of military and civilian jobs at the Cyber Command, its presence attracts military contractors such as

Unisys. Other defense contractors are opening offices and expanding operations. Meanwhile, the state is focusing its cyber activities in Augusta, utilizing the Georgia Cyber Center at Augusta University to train cybersecurity support workers.

Although Augusta's undersized information and financial activities industries spared the region from the restructuring that has plagued these

sectors, it also may limit opportunities for renewed growth in those industries expected in 2021. Low per capita personal income and low overall levels of educational attainment are also negatives for the area.

The single-family housing situation looks good. Housing activity and home prices will be on the upswing in 2021, which is good for homeown-

ers, builders, home renovators, and businesses that depend on consumer spending. In the second quarter of 2020, Augusta's home prices were 13 percent above their pre-Great Recession peak, and were up 6.1 percent year-over-year. Due to low mortgage rates, continuing population and job growth, home prices will continue to appreciate in 2021, but more slowly than in recent years. ❖

Brunswick

From peak-to-trough, this MSA lost 21.9 percent of its jobs to the ongoing recession, with the heaviest losses occurring in hospitality and state government. Because the Brunswick MSA is one of the most tourism-dependent areas in the nation, it took a much harder hit from the pandemic than the state or the nation. For the same reason, the initial three-month rebound was much smaller, with only 30 percent of its job losses recovered.

In 2021, Brunswick's employment will rise by 6.8 percent, mostly due to the delayed recovery of the area's large leisure and hospitality industry. Only after a medical solution to the virus is widely available will tourism dependent areas such as Brunswick see meaningful economic recovery. Although the year-over-year rate of 2021 job growth will be high, the area's economy undoubtedly will be one of the last to fully recover from the pandemic.

In the post-pandemic economy, Brunswick's current weakness—tourism—will become its main strength. Meanwhile, the Port of Brunswick and the influx of new residents will

continue to contribute to the area's economic growth. Brunswick is not very dependent on the information, manufacturing, financial activities, or business services industries. Accordingly, high-tech employment accounts for only 1.6 percent of the area's jobs, compared to 4.4 percent for the state and 5 percent for the nation.

Due partially to the area's focus on tourism, Brunswick's economy tilts towards retailing, a very cyclical industry that is undergoing massive restructuring. The port's presence means that the local area is dependent on international trade and is therefore quite sensitive to global economic conditions as well as to shifts in international trade policies and tariffs. Nonetheless, new investment at the port boosts the area's long-term prospects for trade-based economic growth.

There is a significant aerospace cluster of companies in the Brunswick area: Gulfstream Aerospace Corporation, Jered LLC, Starnbaugh Aviation Inc., Scoject Inc., Quaker State Plating, R.G. Grabber Inc., Palmetto Aviation Repair LLC, and

Skycraft Aviation Specialties. Recent changes in the tax deductibility of corporate jet purchases should benefit the area's aerospace industry, but the pandemic and the trade war have hurt it.

The MSA's top employers, in order, are the Southeast Georgia Health System, Sea Island Company, Brunswick Cellulose, eBay, Walmart, GSI Commerce, King and Prince Seafood Corporation, Gulfstream Aerospace, Rich Products, and International Auto Processing. The area's leading high-wage industries include the federal government and doctors' offices. Leading low-wage industries are restaurants, hotels and motels, and grocery stores. The Brunswick MSA encompasses Brantley, Glynn, and McIntosh counties.

As of the second quarter of 2020, home prices here were 1 percent above their pre-Great Recession peak. It is especially encouraging that the most recent year-over-year data show that home prices rose by 4.5 percent. Job growth, population growth, and low mortgage rates will underpin increased homebuilding activity in 2021, so the prospects for the area's homebuilders are good. ❖

Columbus

This MSA lost 10.9 percent of its jobs to the pandemic-fueled recession, with the heaviest losses occurring in the hospitality, state government, and business services industries. It since has recovered 44 percent of these job losses, which was roughly on par with the rebound posted by the nation as a whole.

The 2021 economic forecast for Columbus is positive, reflecting continuing recovery from the Covid-19 recession. Nonagricultural employment will increase 1,800 jobs, or 1.6 percent, about the same as the 1.5 percent gain expected for the state and higher than the 0.9 percent gain expected for the nation. In addition, several MSA-specific factors will promote local economic recovery: Fort Benning, Columbus State University, and a modest increase in homebuilding. It helps that the area's economy is not too dependent on exports (4.6 percent of GDP) and thus is not overly vulnerable to trade shocks. The cost of living is low and the quality of the workforce is improving.

Due to the presence of Fort Benning, government accounts for almost 20 percent of total nonfarm employment. The area's largest employers are Fort Benning, TSYS, AFLAC, Columbus Regional Healthcare System, St. Francis Hospital Inc., Pezoid Management, Tyson Foods, Blue Cross/Blue Shield of Georgia, The Medical Center, and Synovus Financial Corporation. The leading high-wage industries are

the federal government, nondepository credit intermediation, insurance carriers, and doctors' offices. Leading mid-wage industries include local government, general medical and surgical hospitals, and depository credit intermediation. Leading low-wage industries include restaurants and state government. The main negatives are low net migration, subpar levels of educational attainment, and a relatively undiversified economy. The MSA includes Chattahoochee, Harris, Marion, and Muscogee counties in Georgia and Russell County in Alabama.

In recent years, defense-friendly politics favored Fort Benning. More specifically, the U.S. Army located its new Security Force Assistance Brigade and its Military Advisor Training Academy at the fort. In addition, ICE announced plans to build a new training complex there, so the immediate prospects for Fort Benning are good and no cuts are on the horizon.

Columbus derives much larger than average shares of economic activity from two private-sector industries: financial activities and hospitality. Loan growth, financial deregulation, and recent tax reforms favor top-line growth for firms that provide financial activities, but greater efficiency means the number of jobs may not increase very much. The area's hospitality industry will continue to recover in 2021, but full recovery may take several years. The prospects are better for leisure travel

than for business travel, however.

At present, no major economic development projects have been announced, although there were several noteworthy ones in 2019 including Daechang Seat Company's 100-job manufacturing facility in Phenix City, Alabama. In early 2020, Califormulations—a food and beverage company—opened a new facility in the Muscogee Technology Park in Midland, creating about 30 jobs. In addition, Mercer University plans to convert its Columbus campus into a four-year one.

The outlook for healthcare is good, but weak population trends limits the potential for growth. Nonetheless, the John B. Amos Cancer Center's expansion and renovation will help to ensure that cancer patients spend their healthcare dollars in Columbus. In addition, the VA expect to open its new outpatient clinic in 2021.

The homebuilding industry will see modest gains. As of the second quarter of 2020, single-family home prices in the Columbus MSA finally re-attained their pre-Great Recession peak. It is very encouraging that local housing prices were 6.3 percent higher in the second quarter of 2020 than in the second quarter of 2019. In 2021, new home construction activity will increase slightly, thanks to low mortgage rates and continuing recovery from the Covid-19 recession. ❖

Gainesville

Gainesville's economic performance in the past decade was outstanding, but the area did not dodge the Covid-19 recession. From peak-to-trough, the MSA lost 9.4 percent of its jobs, but has since recovered 53 percent of them, which was roughly on par with the rebound posted by the state as a whole.

Looking ahead, Gainesville's economic recovery will outpace both the state and the nation by significant margins. In 2021, Gainesville-Hall County will recoup about 2,200 jobs—a 2.4 percent gain. The area's top employers include Northeast Georgia Health Systems, Fieldale Farms Inc., Pilgrims Pride Poul-

try Company, Victory Processing, Kubota Manufacturing of America, Mar-Jac Inc., ZF Industries, Inc., Cottrell Inc., Cold Creek Foods, and Walmart. The leading high-wage industries include doctors' offices, motor vehicle parts manufacturing, grocery wholesalers, and heavy machinery manufacturing. The leading

**BASELINE EMPLOYMENT FORECAST FOR
GEORGIA'S METROPOLITAN AREAS, 2020-2021**

Metro Area	2016	2017	2018	2019	2020	2021
Nonfarm Employment¹	4,371.4	4,452.6	4,535.9	4,613.8	4,429.6	4,497.3
Albany	62.0	62.9	62.2	62.9	60.5	60.9
Athens	94.0	96.8	98.3	96.7	92.8	93.5
Atlanta	2,655.3	2,727.8	2,785.6	2,849.4	2,732.6	2,779.0
Augusta	233.3	237.0	240.7	242.7	232.7	235.5
Brunswick	43.6	44.0	44.8	44.7	38.6	41.2
Columbus	120.2	120.8	122.5	122.4	115.5	117.4
Dalton	66.9	66.8	67.7	66.4	62.5	64.0
Gainesville	86.7	89.9	92.3	93.5	90.5	92.7
Hinesville-Ft. Stewart	19.8	20.3	20.7	21.3	21.3	21.5
Macon	102.4	102.8	103.3	103.2	98.1	98.3
Rome	40.6	41.0	41.6	42.0	41.5	42.3
Savannah	176.1	179.3	184.2	186.6	175.2	181.5
Valdosta	56.0	55.8	56.1	56.3	54.4	54.7
Warner Robins	72.6	73.8	75.6	77.4	73.1	74.1
Percent Change						
Albany	1.5	1.5	-1.1	1.1	-3.8	0.6
Athens	3.0	3.0	1.5	-1.6	-4.0	0.7
Atlanta	2.8	2.7	2.1	2.3	-4.1	1.7
Augusta	1.8	1.6	1.6	0.8	-4.1	1.2
Brunswick	3.6	0.9	1.8	-0.2	-13.7	6.8
Columbus	-0.4	0.5	1.4	-0.1	-5.6	1.6
Dalton	0.8	-0.1	1.3	-1.9	-5.8	2.3
Gainesville	3.2	3.7	2.7	1.3	-3.2	2.4
Hinesville-Ft. Stewart	0.5	2.5	2.0	2.9	0.0	1.0
Macon	1.4	0.4	0.5	-0.1	-4.9	0.2
Rome	1.0	1.0	1.5	1.0	-1.2	2.0
Savannah	2.5	1.8	2.7	1.3	-6.1	3.6
Valdosta	1.4	-0.4	0.5	0.4	-3.4	0.6
Warner Robins	2.5	1.7	2.4	2.4	-5.5	1.3

¹Indicates thousands of workers.

Source: Selig Center for Economic Growth, Terry College of Business, University of Georgia, October 2020.

mid-wage industries are local government, general medical and surgical hospitals, and building equipment contractors. The leading low wage industries are animal slaughtering and processing, restaurants, and state government. Productivity per worker is slightly higher than the statewide average. The Gainesville MSA encompasses only Hall County.

Gainesville's ongoing economic recovery as well as good prospects for future economic growth includes: (1) the large number of expansion projects announced over the last decade; (2) growth of the medical, educational, and tourism industries; (3) favorable demographics; (4) a strong housing market; and (5) strong economic prospects for neighboring counties, especially Forsyth, North Fulton, and Gwinnett. The area is an increasingly popular bedroom community for the Atlanta MSA. The Georgia Ports Authority's decision to build an inland port in the Gateway Industrial Centre in Hall County is especially good for manufacturing, distribution, and logistics.

The costs of living and doing business are below average, migration trends are very favorable, and the housing market is strengthening.

Weaknesses include low per capita incomes, the lack of high-wage jobs, and a relatively small percentage of high-tech jobs. The area's industrial diversity is low, but that is to be expected for a metro area that consists of a single county. Low industrial diversity can result in relatively high employment volatility, however.

Gainesville's economic developers have excelled in encouraging existing businesses to expand locally as well as recruiting new companies. Geveko Markings, Fox Factory Holding, Corp, VDL Group, Elastron, Kubota, Mars Wrigley Confectionary, Jinsung TEC, Alfrex, and Mincey Marble are good examples of manufacturers that decided to expand or locate in Gainesville. The high economic multipliers associated with these projects spread the benefits of these expansions to people working in other businesses, too. Recent expansions outside of manufacturing include logistics/distribution firm Tatsumi Intermodal, risk management firm Lowers Risk Group, and ProCare Rx, a healthcare IT firm.

The medical sector will be an important economic driver. The Northeast Georgia Medical Center is very highly rated and draws many

patients from surrounding rural and metropolitan Atlanta counties, becoming a true medical service hub.

Gainesville also is a major postsecondary education hub, which generates large direct economic impacts. Each semester, the University of North Georgia, Brenau University, and Lanier Technical College add newly minted talent to the supply of workers that businesses need to expand.

The demographic forces supporting Gainesville's economic growth are very strong: Hall County's substantially above-average population growth supports the expansion of local businesses. Gainesville in an increasingly popular choice for workers commuting to jobs in the Atlanta MSA; in fact, one out of every eight residents of Gainesville-Hall County works in Gwinnett County.

The housing market will continue to improve. As of the second quarter of 2020, existing home prices were 18.8 percent above their pre-Great Recession peak. Prices increased by 5.9 percent between the second quarter of 2019 and the second quarter of 2020, buoyed by the ongoing economic recovery, very strong population growth, and very low mortgage rates. ❖

Macon

From peak-to-trough, this MSA lost 8.8 percent of its jobs to the Covid-19 recession and recovery will be very slow. On an annual average basis, 0.2 percent job growth is expected for the area in 2021. Although overall employment will not expand very much, healthcare, hospitality, and construction will add jobs, but job losses in retailing, information, financial activities, and government will offset those gains.

Macon's top employers are GEICO, Navicent Health Medical Center, Coliseum Health Systems, Mercer University, and the Georgia Farm Bureau Federation. The five-county MSA—which includes Bibb, Crawford, Jones, Monroe, and

Twiggs counties—benefits from its focus on transportation and logistics, financial activities, higher education, healthcare, and professional and business services. The area's large, healthcare industry is a short- and long-term strength. High-wage industries include doctors' offices, the federal government, and rail transportation. Insurance carriers, colleges and universities, and general hospitals are the mid-wage leaders, while state and local government and restaurants follow at the low end.

Macon's role as a center for transportation and logistics serves the area very well, although the industry is very cyclical. The city is located strategically at the intersec-

tion of I-75 and I-16, has two railroad lines, is home to the largest rail-switching center on the East Coast, and has a good regional airport. The MSA's central location also makes the area a good place to host statewide meetings or conventions, so once the pandemic is curtailed, the hospitality industry will be a positive force for growth. The area also is a remote bedroom community for the southern portion of the Atlanta MSA to which 4.3 percent of Macon's residents commute to jobs.

Like the other MSAs, Macon's economic growth has been limited by outmigration, and the population will not grow very much in 2021. It is especially worrisome that too

many who are in their prime working years leave the area, possibly because there are few high-tech jobs available. Then again, the MSA's relatively low levels of educational attainment makes it very difficult to attract the types of companies that are likely to

bring high-tech jobs. One positive, however, is that net foreign migration to the MSA means that over 200 newcomers move here each year.

As of the second quarter of 2020, home prices were 2.2 percent

above their pre-Great Recession peak, and were up 6.1 percent year-over-year. In general, the outlook for local homebuilders is positive, but the gains will be small. ❖

Savannah

The Savannah MSA lost 14.3 percent of its jobs to the ongoing recession, with the heaviest job losses occurring in the hospitality, information, state and local government, and other services industries. In contrast, the education and health services sectors added jobs.

In 2021, Savannah's economic recovery will kick into a higher gear, with employment forecast to increase by 3.6 percent, which is more than double the 1.5 percent gain forecast for the state and four times more than the 0.9 percent gain projected for the nation. The large percentage gain in jobs reflects several factors: Savannah's large tourism industry will post impressive gains after being moribund for most of 2020. Many economic development projects will break ground. Recent and proposed infrastructure projects at the Port of Savannah will result in much higher container traffic; and Savannah's population is poised to grow.

Savannah's long-term strength is its multi-faceted personality: that of a major tourist destination, an aerospace manufacturing center, an extraordinarily successful port, and a retirement mecca. Gulfstream is the

area's largest employer, followed by Memorial Health University Medical Center, Fort Stewart/Hunter Army Airfield, St. Joseph's/Candler Hospital, Walmart, Savannah College of Art and Design, Georgia Pacific, and Fred Meyer Stores. The leading high-wage industries include the federal government and doctors' offices. The mid-wagers are local government, general hospitals, and the military, followed by restaurants, employment services, and grocery stores at the low end. The Savannah MSA includes Bryan, Chatham, and Effingham counties.

In 2021, Savannah will benefit from economic development projects announced over the last several years. Last year, Medline Industries—a manufacturer and distributor of medical supplies—said it would build a new distribution center in Bryan County that initially will support 150 new jobs with the capacity to support up to 600 workers as the company grows. Plastics Express expects to expand its operations in Chatham County with two new manufacturing facilities, creating 166 jobs. Anatolia Tile and Stone decided to locate its new distribution center in Savannah,

creating 124 jobs, and aerospace company Preci-Dip expected to open its first U.S. production facility in Bryan County, creating 100 jobs

Savannah's unique ambiance and transportation infrastructure make it an attractive place to live and do business. Tourism is a big draw, so hotel development has been and will continue to be very strong. Retirees flock here, but so do people of all ages, so net migration is a big plus. Of course, the port—one of the busiest on the East Coast—is a major economic driver, contributing over 51,000 jobs. Once the pandemic is over, tourism and convention business is expected to rebound, so the Savannah International Trade and Convention Center embarking on plans for a \$210 million expansion to its facilities on Hutchinson Island.

As of the second quarter of 2020, home prices in the MSA were 14 percent above their pre-Great Recession peak. The 2021 outlook for homebuilders is positive, reflecting low mortgage rates, population growth, and accelerating recovery for Savannah's tourist- and port-dependent economy. ❖

Valdosta

With heavy employment losses in government and the hospitality industry, the Valdosta MSA lost 9.1 percent of its jobs to the Covid-19 recession. Although it now has recovered 52 percent of these losses, recovery will be relatively slow.

In 2021, Valdosta's employment will increase by 0.6 percent, or 300 jobs, which is lower than the 1.5 percent and 0.9 percent growth expected for Georgia and the U.S., respectively. Healthcare is likely to be an economic driver.

Structurally, this metro area is extremely dependent on government jobs. The hospitality industry also accounts for a much larger than average share of the area's nonfarm jobs. In contrast, professional and business services, financial activities, and wholesale trade account for relatively low shares of nonfarm employment. Industrial diversity is relatively low, which makes the overall business environment riskier.

The area's top employers are Moody Air Force Base, South Georgia Medical Center, Fresh Beginnings, Valdosta State University, and Wild Adventures. The leading high-wage industries are the federal government and doctors' offices. The leading mid-wage industries are local government, car dealers, and building equipment contractors. The leading low-wage industries are government and warehousing/storage.

In 2021, continued growth in consumer spending will ensure that Valdosta benefits from its traditional role as a retail hub for extreme

Southwest Georgia. Retail jobs account for a higher share of economic activity here than in either the state or the nation. Nonetheless, like traditional retailers everywhere, Valdosta's retailers will face more competition from online shopping, which will limit retail job growth.

Because Valdosta is a small MSA—comprised of Brooks, Echols, Lanier, and Lowndes counties—the actions for the better, or for the worse, by one major company can determine the area's actual economic performance. In 2019, Arglass Yamamura announced plans to build its first U.S. glass container factory in Valdosta, which will create 150 manufacturing jobs, and Better Way Products said it would build a new fiberglass manufacturing facility in Valdosta, initially creating about 20 jobs, and increasing to 86 jobs in three years.

The outlook for hospitality and tourism calls for ongoing recovery from depressed levels. Valdosta will continue to leverage its location on I-75 as a convenient place for overnighting visitors bound for Orlando or Tampa. The city's central location between Atlanta, Jacksonville, and Tallahassee also works to the hospitality industry's advantage.

Government accounts for a high proportion of local jobs mainly due to Moody Air Force Base, which is Valdosta's largest employer, so government restructuring is a potential headwind. The Air Force has talked about retiring the A-10 plane, which is based at Moody, but a cost-effective

substitute has not been found. Still, the potential retirement of the A-10 is a serious, potential, threat to the local economy.

In addition, Valdosta is extremely dependent on spending by state and local government. So, fiscal austerity due to pandemic's negative impact on revenue collections could be very tough on Valdosta and is a major downside risk for the area's economy.

Valdosta is a college town and Valdosta State University has a \$383 million impact on the local economy. The university's excellent reputation continues to attract many students from outside the region, adding to student spending and to the supply of newly minted college graduates. In addition, the university's presence attracts new businesses and industries, especially in its relatively undeveloped high-tech sector.

Existing single-family home prices have not fully recovered from the Great Recession, and as of the second quarter of 2020, prices were 2 percent below their pre-Great Recession level. This failure to rebound from recessionary ravages reflects weak demographics and a paucity of high-wage job growth. In 2021, modest price increases are expected, which will help support higher consumer spending, entrepreneurial activity, and new home construction. The outlook for contractors calls for a modest increase in homebuilding activity, reflecting low mortgage rates, recent strong increases in the prices of existing homes, and continuing recovery from the Covid-19 recession. ♦

This sector should weather the Covid-19 storm better than most other industries in 2021.

As of July 2020, year-to-date employment in grew by 1.1 percent. Of the three healthcare subsectors, hospitals exhibited the strongest employment growth-up by 3.4 percent. Employment in nursing and residential care grew by 1.9 percent. Employment in ambulatory healthcare, the fastest growing subsector for many years prior to Covid-19, experienced a 0.7 percent employment loss. Despite a few setbacks, the healthcare sector in Georgia will likely recover from the effects of Covid-19 by the end of 2021. About 445,000 Georgians work in the industry.

Though the healthcare industry in Georgia is strong, average health of residents is on the decline. Georgia ranked 40 out of 50 states in citizen health as of 2019, before Covid-19 had any effect on the population. Also concerning is the disparity in access to healthcare in the state, which has been intensified by loss of access to employer-sponsored healthcare now that the unemployment rate has doubled to 7.6 percent over the past year. Nationwide trends of increasing costs of care and pharmaceuticals will further intensify the disparities.

Pitfalls of Employment-Linked Health Insurance

In 2019, employer-sponsored health insurance covered more than half of the U.S. population under 65. According to a study by Families USA, an estimated 5.4 million American workers lost health insurance coverage between February and May 2020 due to the Covid-19 recession. That increase in uninsured adults was 39 percent higher than any an-

nual figure previously recorded. The second-highest spike in uninsured adults occurred in the 2008 recession when 3.9 million lost their employer-sponsored healthcare over the course of a year. An estimated 178,000 Georgians lost their health insurance between February and May 2020, and Georgia is now one of eight states where more than 20 percent of adults are uninsured. The overall uninsured rate in Georgia jumped from 19 percent in 2017 to 23 percent in 2020. The proportion of uninsured Georgians will likely hit 25 percent in 2021, four years sooner than projected pre-pandemic.

There are currently three solutions to loss of employer-sponsored health insurance. Recently unemployed adults can utilize COBRA for 36 months, but even the heavily subsidized premiums as low as \$139 per month can be unaffordable for those attempting to pay their bills with unemployment benefits. Another option is purchasing an Obamacare plan, but due to the repeal of the individual mandate in 2019, the risk level of those insured by Obamacare has gone up. After the financial penalty for not having health insurance was repealed, younger and healthier adults chose to forego health insurance coverage altogether. As of 2018, average Obamacare family health insurance premiums were already as high as \$1,168 per month and have likely skyrocketed since the repeal of the individual mandate. The final option for adults who lose their employer-sponsored health insurance is to apply to Medicaid, but it can be difficult to get approved quickly unless you are pregnant, have children, or have a recorded disability. Coverage can be especially spotty in states—including Georgia—that chose not to expand Medicaid.

Recently unemployed individuals face a huge struggle to obtain affordable health insurance coverage. Many take the risk and choose to forego health insurance and preventative care until they have jobs again. The quality-to-cost ratio of employer-sponsored health insurance plans has also deteriorated over the past few decades, with employers requiring employees to shoulder

a larger proportion of monthly premiums, encouraging employees to choose higher-deductible plans, and penalizing employees with fees when they choose to cover a spouse. It's no surprise that employers are becoming more creative with cost-cutting measures; the average annual cost of employer-sponsored health insurance increased by 54 percent over the ten-year period from 2009 to 2019, from \$13,375 to \$20,576. Though the proportion paid by employees only increased by 5 percent (from 24 percent employee responsibility to 29 percent), employees' total annual premiums jumped by 71 percent, from \$3,515 in 2009 to \$6,015 in 2019.

High-deductible health plans (HDHPs), which are defined by an annual deductible of \$1,400 or more for a single adult or \$2,800 or more for a family, are becoming more popular as employees seek to pay less for monthly premiums. Employers often encourage employees to choose less-expensive and less-comprehensive plans by subsidizing HDHPs through pre-tax funding contributions to a Health Savings Account (HSA). These plans can be a great value for younger and healthier adults with infrequent medical expenses, but they are not a great match for older workers or those with chronic conditions. Still, the proportion of employees choosing HDHPs increased by 50 percent over the past five years, from 20 percent in 2014 to 30 percent in 2019. Over the same time period, the proportion of employees choosing more comprehensive PPO plans dropped from 58 percent to 44 percent.

Employer-sponsored health insurance used to be an affordable and reliable way to obtain healthcare when workers stayed at the same company for most of their careers. Employers also had greater power to negotiate lower costs for their workers. Now that employer-sponsored health insurance is the primary source of insurance in the U.S., even the largest firms have lost much of their bargaining power and insurance companies now set the price. This has resulted in the U.S. paying more per capita for healthcare than any

other industrialized nation.

It is clearly a public health issue when a significant portion of Americans have lost their health insurance during a worldwide pandemic. The first federal stimulus package sought to shore up employment losses by extending relief to employers via PPP loans. These loans encouraged employers to keep employees on payrolls despite huge drops in business. This program did a decent job of preventing a huge spike in unemployment and a subsequent loss of employer-sponsored health insurance in the short term. However, applications for PPP loans closed August 8, and, as this is being written, prospects for a second federal stimulus package by the end of 2020 are bleak. At the same time, many states are seeing a second spike in Covid-19 cases which may necessitate a second round of shutdowns at the state and local level. Without another federal program of low- or no-interest loans to motivate employers to delay layoffs, there will likely be a second, possibly greater loss of employer-sponsored health insurance in the coming months.

U.S. Outlook

Sectoral employment was growing nationwide before the pandemic and accounted for 10.8 percent of all nonfarm employment in the U.S. as of August 2019. One year later, year-over-year employment had fallen by 3.3 percent. Ambulatory healthcare services, which includes offices of physicians, dentists, and other health practitioners fell by 3.2 percent. Employment in hospitals fell by 1.2 percent despite the nationwide spike in emergency and intensive care. Employment in nursing and residential care dropped by 6.6 percent.

The pandemic reversed many ongoing trends in the healthcare industry. The primary trend temporarily reversed by Covid-19 was the shift in employment from hospitals to ambulatory healthcare. For decades, medical technology and surgical techniques permitted more surgeries and other health services to be performed as outpatient. When the pandemic hit, almost all non-

emergency surgeries were postponed. This led independent doctors' offices to furlough or lay off some staff due to a lack of patients.

Even with widely available telehealth programs, ambulatory healthcare employment is unlikely to recover to pre-Covid-19 levels until a vaccine is widely available. Many potential patients will deem in-person doctors' visits too risky until the rate of new cases has lowered. The five million Americans who lost their employer-sponsored health insurance due to the pandemic will also dent demand for ambulatory healthcare. Demand for healthcare, previously thought to be largely inelastic, has exhibited more elasticity than economists first thought. Americans will postpone or forego healthcare when the cost or perceived risks are too high. Offices of dentists, chiropractors, and optometrists are likely to be the slowest to recover as many Americans are likely to postpone health services that they see as voluntary or preventative.

Another trend reversed by the pandemic is growth in nursing and residential care facility employment. As of 2018, 16 percent of Americans were 65 or older; by 2025, one in five Americans will be over 65 as the youngest baby boomers age into this category. Accordingly, demand for elder care facilities was growing consistently. Employment in nursing and residential facilities increased by 9.7 percent from 2010 to 2020. The pandemic largely erased that growth: between January and August 2020, employment in nursing and residential care fell by 6.7 percent.

Employment in the nursing and residential care industry crashed suddenly as facilities experienced deadly outbreaks, even with strict prevention measures in place. Many facilities were forced to close. For several months during the pandemic, most states banned visitors to elder care facilities. Only staff could come and go, and unfortunately, they unwittingly caused outbreaks among the residents. As of early September, 139,000 Americans over 65 died of Covid-19, and now many families are choosing to care for their loved ones at home, leading to a decline in

demand for elder care services and a subsequent drop in employment.

In June 2020, hospitals and health systems reported a 19.5 percent decline in inpatient volume and a 34.5 percent decline in outpatient volume. With a precipitous drop in demand for surgeries and procedures as well as the increased costs of PPE and lower bed capacity mandates, hospital revenues were hit hard by the pandemic. In a June 2020 report, the American Hospital Association estimated nationwide hospital financial losses at \$323.1 billion over the entire year. Despite \$175 billion in relief funds disbursed to hospitals and other healthcare providers, the financial impact of Covid-19 on the healthcare industry will be a shock felt through the end of 2021.

Georgia Outlook

Compared to most other states, Georgians have below-average health. In 2019, the United Healthcare Foundation ranked Georgia 40 among 50 states in citizen health. Health among seniors was even lower, with Georgia ranked 41. In terms of childhood immunizations, Georgia was at the bottom, with only 65.6 percent of children receiving vaccinations, putting them at great risk of communicable diseases. As of 2019, 32.5 percent of Georgia's adults and 18.4 percent of children were obese. That puts Georgia in the top ten states for childhood obesity. Death rates from heart disease, cancer, and diabetes were above national averages. These health trends made the average Georgian more likely to be hospitalized or die from Covid-19.

Georgia's health system performance also ranks poorly. In 2020, the Commonwealth Fund placed Georgia 46 out of 50 states in overall performance, and 49 in access and affordability. In 2018, 18 percent of Georgians over 18 went without care due to prohibitive costs and lack of health insurance. Georgia ranks 47 in the proportion of uninsured adults, estimated at 19 percent in 2018. This proportion reached 23 percent at the peak of the Covid-19 recession as almost 200,000 Georgians lost their employee-sponsored healthcare in a span of four months. The propor-

tion of uninsured adults in Georgia may take a long time to recover to pre-Covid-19 levels unless a second federal stimulus package is passed by the end of 2020 with a specific focus on health insurance. So far, the prospects for this are dim.

Income has a huge effect on health disparity and access to care. In 2020, Georgia ranked 50 in healthcare coverage disparity due to income. As of 2018, 36 percent of Georgia's low-income (under 200 percent of the Federal Poverty Level) adults aged 19 to 64 lacked health insurance compared to only 7 percent of higher-income adults. In 2018, 32 percent of low-income Georgians did not seek care due to cost while only 7 percent of higher-income Georgians did the same. Low-income adults also are more likely to have poor health indicators, largely due to a lack of preventative care, poor diet, and less exercise. As of 2018, 37 percent of low-income adults in Georgia were obese, 7 percent higher than the obesity rate of higher-income Georgians. Income inequality has been intensified by the pandemic, which will further exacerbate these problems.

Georgia's low-income adults face the most disparity in access to and affordability of healthcare. Medicaid is the primary tool to combat this, but Georgia's political leaders have resisted implementing full Medicaid expansion under the ACA. In January 2020, the Kaiser Family Foundation estimated that 518,000 Georgians lacked health insurance, though that number is now closer to 700,000, due to the pandemic. According to their study, only 44,000 of those currently uninsured would be eligible. About 255,000 of those uninsured are in the Medicaid coverage gap, as their income is less than 100 percent of the federal poverty level, but they make too much according to Georgia's Medicaid income limits. Another 219,000 of those uninsured would be within the 138 percent FPL requirement under the Medicaid expansion.

Not all barriers to healthcare access are financial. Some of the access issues in Georgia are due to healthcare 'deserts' in rural areas.

Georgia's healthcare industry is very strongly concentrated in metro areas, specifically Atlanta. With over 60 percent of ambulatory healthcare professionals located in the Atlanta MSA, there is plenty of room for employment growth in the subsector elsewhere in Georgia. In 2014, it was estimated that less than 60 percent of the primary healthcare need in Georgia was being met. Based on this estimate, Georgia's healthcare sector has the potential for significant growth into more rural areas. At the very least, concentration of healthcare professionals could be more well-distributed among other metro areas across the state.

Ambulatory Healthcare

This largest subsector includes the offices of physicians, dentists, and all other health practitioners. It also includes outpatient care centers, medical and diagnostic laboratories, and home healthcare services. Unlike hospitals, the facilities and equipment are usually not the most significant expense. Ambulatory healthcare also has more room for specialization than hospitals.

As of July 2020, ambulatory healthcare provided just over 220,000 jobs in Georgia. In order to examine employment trends in more specific industries, older data was utilized. The most recent industry-specific data available was data from the first quarter of 2020, which only encompassed the very beginning of the pandemic. However, since employment is expected to return to pre-pandemic levels by the end of 2021, the available data should be relatively useful.

Physicians' offices is the largest industry by far in the ambulatory healthcare subsector, employing 105,464 Georgians as of March 2020. Home healthcare services is the second-largest industry, with 28,657 employees, and offices of dentists is third, employing 28,451 Georgians. Offices of other health practitioners, which encompasses chiropractors, optometrists, mental health practitioners, and specialty therapists employed 26,775. Outpatient care centers employed 17,637. The smallest industry in the

ambulatory healthcare subsector was medical and diagnostic laboratories, with 7,313 employees.

All high-level private ambulatory healthcare industries saw above-average employment gains from March 2019 to March 2020. State-level employment growth across all privately-owned establishments was 0.9 percent. Employment in offices of physicians grew by 6.2 percent; home healthcare services grew by 3.7 percent; offices of dentists rose by 1 percent; and offices of other healthcare practitioners grew by 4.6 percent. Outpatient care centers grew the fastest, with an increase of 6.7 percent from March 2019 to March 2020. Of these industries, only employment in offices of physicians is more geographically concentrated in the state, with an employment location quotient of 1.27 (27 percent more concentrated than the average state) in March 2020.

Despite an employment loss of 0.7 percent from July 2019 to July 2020, employment in this subsector should return to pre-pandemic levels by the end of 2021. Georgia's ambulatory subsector was significantly more resilient than that of the nation, which experienced an employment loss of 3.2 percent.

In terms of GDP, Georgia's healthcare and social assistance sector accounted for a lower proportion of GDP loss than both the nation and the Southeast. In the U.S., healthcare and social assistance accounted for 0.6 percent of the 5% percent drop in GDP from Q4 2019 to Q1 2020. In the Southeast, it accounted for a higher proportion (0.62 percent of the 5 percent drop). In Georgia, healthcare and social assistance only accounted for 0.41 percent of the 4.7 percent overall GDP loss. Though the state-level GDP data that is currently available does not encompass the peak of the Covid-19 recession, Georgia's relatively smaller losses signal that the healthcare sector is relatively stronger and more resilient than it is in the U.S. and the Southeast.

Hospitals

This subsector provides medical, diagnostic, treatment, and other health services to patients. Some

hospitals also provide outpatient services. Specialized facilities and equipment are a major expense of hospitals. As of July 2020, hospitals provided 164,000 jobs in Georgia. Employment in Georgia's private hospitals grew by over 5,400 employees, or 3.4 percent, from July 2019 to July 2020.

As of March 2020, 81.2 percent of employment—151,127 jobs—in Georgia's hospitals was in the private sector. Public hospitals employed 34,886 across federal, state, and locally owned establishments. While federally- and local government-owned hospitals experienced slight gains in employment or stayed flat, state-owned hospitals lost 3.2 percent of their employees from March 2019 to March 2020 after two of the twelve state-owned hospitals in Georgia closed.

Despite losses in the public sector, employment in the hospitals subsector should remain stable in 2021. As outpatient surgeries resume after the pandemic, hospitals will likely increase their outpatient services and satellite clinics.

Fifty-eight percent of Georgia's hospital jobs are in the Atlanta MSA. Unfortunately, the disparity in access to hospitals that many rural communities face is unlikely to be solved within the next few years. Many counties in Georgia lack hospitals, forcing residents to travel long distances for medical care. Some rural counties depend solely on small, understaffed clinics for medical services. As poor health and old age cause demand to overwhelm smaller clinics, an increase in the number of hospitals in rural Georgia could significantly stimulate employment in the healthcare industry.

Nursing and Residential Care

The nursing and residential care subsector encompasses establishments that provide inpatient nursing care, rehabilitative services, and other care. Often, care is provided for an extended period. Many patients stay in nursing homes and residential care facilities for weeks, months, years, or even decades. As of July 2020, nursing and residential care facilities provided over 60,000 jobs in Geor-

gia, with 1.9 percent year-over-year employment growth since 2019. Privately-owned nursing and residential care facilities comprised 94 percent of employment in Georgia as of March 2020. For the most part, private employment in nursing and residential care has been on an upward trend, though there were some losses from late 2016 to mid-2018. From March 2019 to March 2020, employment increased by 1.8 percent and number of establishments increased by 4.3 percent.

State-owned nursing and residential care facilities make up only 4 percent of employment in Georgia, and employment has been falling for many years. From March 2019 to March 2020 alone, employment in state-owned nursing and residential care facilities decreased by 5.9 percent. Finally, local government-owned nursing and residential care facilities account for less than 2 percent of employment and have lost 7.9 percent of its jobs from 2016 to 2020.

Within private nursing and residential care, assisted living facilities made up about one-third of employment as of March 2020. Employment in these facilities is growing fast and will continue to do so due to Georgia's popularity as a Sunbelt retirement state and changing demographics. From March 2016 to March 2020, employment in assisted living facilities grew by 18.3 percent and number of establishments grew by 6 percent. Over the most recent year, employment grew by 3.8 percent.

As more Americans struggle with decreasing mental health, residential mental health facilities have popped up all over Georgia to meet the demand. Although these facilities only make up about 8 percent of employment within nursing and residential care, they are growing quickly. From March 2016 to March 2019, employment in these facilities grew by 20.5 percent and establishments increased by 15.6 percent. The most recent year saw the greatest increase in both employment and establishments, up 8.2 percent and 12.9 percent, respectively. ❖

