

DAKOTA OUTLOOK

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Introduction

Introduction | Jared McEntaffer

Welcome to the inaugural edition of the Dakota Outlook, a quarterly publication from the Dakota Institute. Every quarter our experts provide professional and informative analysis on key sectors and trends of interest to business leaders and policy makers. The Dakota Outlook also provides data driven forecasts to help our readers understand what might be in store for the regional economy.

In this issue we take a special focus on the high inflation rate in the US and how it impacts the South Dakota economy. The 2022 Q4 forecast expects inflation to remain elevated for an extended period, and we forecast inflation will remain above the Fed's 2% target through 2023. And while inflation remains stubbornly high in the face of Fed action, higher interest rates are slowing demand and economic growth. We still forecast 1.8% growth for South Dakota and 0.8% growth for the US in 2022, but that leaves the strong growth of 2021 a distant memory.

Slowing growth and high inflation are also biting into paychecks across South Dakota and the US. Nominal incomes, which don't account for the effects of inflation, continue to grow strongly but income growth has not kept up with inflation which is causing real income growth (i.e. inflation adjusted income growth) to turn negative. Real personal income at the national level contracted through the first and second quarters of the year, and we forecast it will close the year down 5.6% before rebounding slightly in 2023. Real personal income for South Dakota, in contrast, was mostly flat through the first half of the year, though we forecast the second half of the year will turn negative and result in a 3.3% contraction for 2022 before rebounding in 2023.

Perhaps no market has seen prices rise as rapidly over the past year as has the housing market. Housing prices in South Dakota and across the United States increased dramatically over the past two years. The ramp up was especially pronounced in South Dakota where the inflation adjusted median list price in September 2022 was 17.1% higher than it was the year prior. Higher interest rates have stalled housing markets but the current forecast has median list prices in South Dakota ending 17.8% higher in 2022 than they were the year prior and national prices closing the year up 5.9% from the prior year. The forecast also anticipates a construction slowdown, but the state is expected to weather it better than the nation. Building permits are forecasted to close 2022 up 42.3% in South Dakota compared to only 4.0% at the national level, and new permit issuance in South Dakota is forecasted to grow an additional 10.7% in 2023 compared to 3.0% for the US.

The final section of this issue explores the worker shortage which has dominated the workforce conversation throughout much of 2022. Both South Dakota and the US have enjoyed strong employment growth in the wake of the pandemic. Total employment at the end of Q3 2022 is now higher than it was before the pandemic, both for South Dakota and the US. Labor markets remain stubbornly resistant to any rumors of macroeconomic slowdown, though cracks are starting to appear.

The current forecast estimates South Dakota will see 2.8% employment growth in 2022 and 1.2% in 2023. National employment is forecasted to finish 2022 more strongly with 3.1% year-over-year growth, but the slowdown in 2023 is expected to be more severe leaving 2023 employment growth flat at 0.0%. Slower hiring growth and a potential macroeconomic slowdown will combine to push the national unemployment rate higher according to the forecast. We expect a 4.9% unemployment rate in 2023 compared to 3.8% in 2022 and 3.9% in 2021. We also forecast that South Dakota's unemployment rate will rise to 2.8% in 2023, compared to 2.3% in 2021, and 2.9% in 2021.

What's Driving the Inflation Bus?

Macroeconomy | Jared McEntaffer

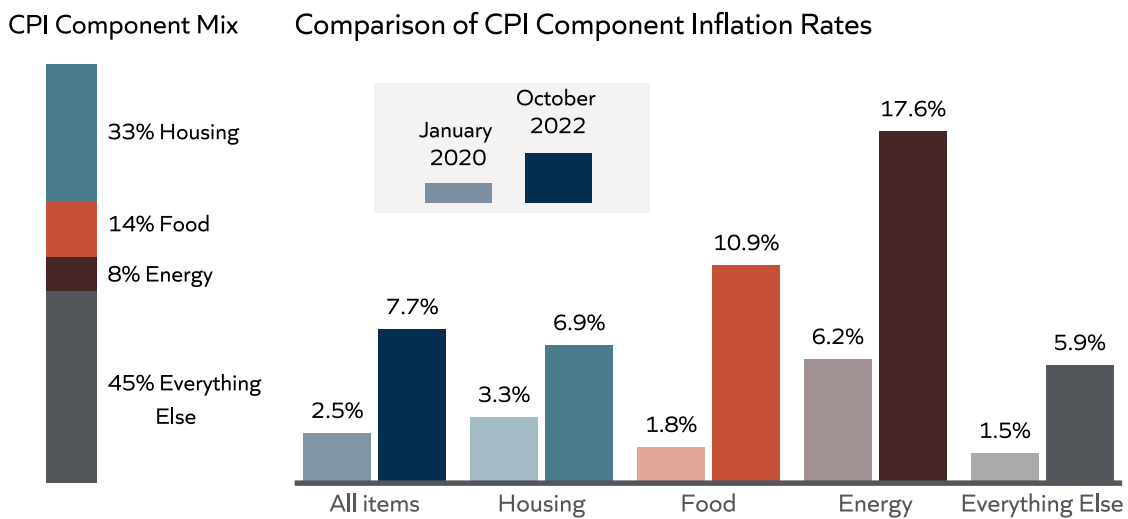
On November 3, 2022 the Federal Reserve announced another 75 basis point hike in the Federal Funds rate (the overnight interest rate on interbank loans), raising its target from 3.25% to 4.00%. The Fed is signaling through every possible channel that it is committed to slowing and then reversing the current inflationary trend. The most recent October inflation report from the Bureau of Labor Statistics did indicate slowing inflation which might give the Fed some breathing room, but there is also evidence that inflation will remain elevated for many months to come.

The Bureau of Labor Statistics' most recent inflation report for October 2022 estimated the 12-month inflation rate for October was 7.7%. In other words, the Consumer Price Index (CPI) in October 2022 was 7.7% higher than it was in October 2021. While 7.7% inflation might not sound like welcome news to consumers, the Fed was likely encouraged given that September's 8.2% 12-month inflation estimate was a 40 year high. Unfortunately for consumers and the Fed alike, the dip is likely transitory, to borrow the Fed's language, and inflation is unlikely to disappear any time soon even if the Fed continues on its current rate path.

The Bureau of Labor Statistics monitors changes in the US price level using a market basket approach. BLS collects almost 94,000 data points every month from more than 23,000 retailers and service providers, including data on 8,000 rental units. These price data are grouped into eight major categories such as, Food, Shelter, Energy, and Healthcare. BLS then weights each category to reflect consumer spending patterns and constructs the CPI. Three of the most important CPI component categories are Shelter, Food, and Energy, which represent 33%, 14%, and 8% of the CPI respectively, which together make up 55% of the CPI. The remaining five component categories make up the remaining 45% of the CPI.

Sources of CPI Inflation Pressures

CPI Composition and Component Inflation Rates



Source: Dakota Institute, BLS

Macroeconomic Summary and Forecast									
	Actual						Forecast		
	2018	2019	2020	2021	2022:Q1	2022:Q2	2022:Q3	2022	2023
Real GDP (% YoY)									
SD	1.1	0.8	1.6	4.5	1.7	-1.7		1.8	0.8
US	2.9	2.3	-2.8	5.9	-1.6	-0.6		0.2	1.1
Price Level (% YoY)									
CPI	2.4	1.8	1.2	4.7	8.0	8.6	8.3	8.0	5.0
Core CPI	2.1	2.2	1.7	3.6	6.3	6.0	6.3	6.2	4.2
PPI (Final Demand)	2.9	1.7	0.0	7.0	10.8	11.1	8.9	9.8	4.0
Interest Rates (%)									
Fed Funds Target	2.00	2.22	0.53	0.25	0.50	2.50	3.25	4.00	5.50
Mortgage Rate	4.55	3.74	2.67	3.11	4.67	5.70	6.70	6.95	6.25
10 Year Treasury	2.69	1.92	0.09	1.52	2.32	2.98	3.83	4.05	3.75

Source: Dakota Institute, Wells Fargo Economics, BEA, Federal Reserve

The problem facing the Fed is that all three of these major CPI components are seeing rapid price growth that will likely persist for several quarters. The latest CPI report showed that Food prices in October were 10.9% higher than they were 12 months prior, and Energy prices were 17.6% higher over the same period. By way of comparison, the year-over-year inflation rates of the Food and Energy components in January 2020, just prior to the Covid-19 pandemic, were 1.8% and 6.2% respectively. Food and Energy prices are likely to keep rising at least through the end of Q1 2023 just due to lingering supply chain issues and the war in Ukraine. If winter temperatures prove unseasonably cold, especially in Europe, then energy prices are likely to rise even more through the first half of 2023.

Perhaps more importantly, inflationary pressures have started bleeding out of the volatile food and energy components of the CPI into the housing and services sectors which will take longer to get under control. Evidence of this dynamic was provided by the October CPI which reported a 6.9% increase in Shelter costs, compared to 3.3% in January 2020.

The danger for the Fed is the degree of price momentum baked into the Shelter component of the CPI. Home prices and rental rates rose steadily throughout 2021 and 2022. The housing market has started to cool and home prices have started to fall, but the Shelter component of the CPI is likely to continue rising. First, higher interest rates are increasing borrowing and housing costs even as home prices fall. Second, rental rates are guaranteed to keep rising for several quarters as contracts renew and rents adjust upward to reflect current market prices. Because housing represents one-third of the CPI these price pressures are likely to keep the CPI elevated for an extended period.

In response to rising inflation over the past year the Fed has consistently raised rates over the last few months. The Fed has raised its Fed Funds Target rate from 0.5% in March to 4.0% in November, and we forecast the Fed will continue to raise its Fed Funds Target through the first three quarters of 2023 before starting to taper by the end of 2023. Of course there is no free lunch and the Fed's rate hikes are having their intended effect of slowing the economy. Both the nation and state economies have slowed in 2022 and we forecast continued slow, but positive, growth by the end of 2023 though the first half of the year is likely to see a contraction in output.

High Inflation Leads to Negative Income Growth.

Income & Wages | David Sorenson

South Dakota real (inflation-adjusted) personal income is trending downward in 2022 after growing each year between 2017 and 2021. While the state experienced growth in the first quarter of 2022, the inability to keep up with inflation led to a greater decline in the second quarter. Mixed quarterly gains and losses have been typical since the beginning of the COVID pandemic, while quarters with personal income losses were less common in the previous three years. When accumulated over entire years, South Dakota experienced healthy income growth rates of 8.5 and 2.8% in 2020 and 2021, respectively, which followed the low-growth 2017, moderate-growth 2018, and higher-growth 2019. The 2022 South Dakota experience has been markedly better than the nation's declines of over 4.5% (annualized) in each first two quarters of the year. The US had experienced annual growth between 2017 and 2021, although with less variation than South Dakota's growth.

South Dakota's faster growth has led to the state approaching and often surpassing the nation in per capita personal income, a relationship last seen in annual data in 2015. The US per capita income exceeded South Dakota's each quarter from the beginning of 2017 to the beginning of the pandemic, with the annualized gap ranging from about \$500 to \$2,700. South Dakota's per capita income exceeded the national figure in the first quarter of 2020 and has maintained its lead in five of the following eight quarters. The South Dakota lead reached more than \$2,000 higher in the fourth quarter of 2020, most likely reflecting the greater state economic activity in the early months of the pandemic. Looking further back into data since 2000 reveals that the flip from a higher US per capita income than South Dakota per capita income also occurred between 2008, another year of great economic turmoil, and 2015.

Income Summary and Forecast								
	Actual						Forecast	
	2018	2019	2020	2021	Q1:2022	Q2:2022	2022	2023
Personal Income								
SD (% YoY)	2.3	5.1	8.7	2.9	0.9	-1.0	-3.3	2.1
US (% YoY)	2.6	3.3	5.5	2.8	-5.8	-4.4	-5.6	0.9
Per Capita Income								
SD (\$)	60,626	63,118	68,149	69,424	66,467	66,122	66,482	67,353
US (\$)	62,509	64,210	67,381	69,080	65,738	64,993	65,292	65,649
SD (% YoY)	1.7	4.2	8.1	1.9	0.1	-2.1	-4.2	1.6
US (% YoY)	1.9	2.7	4.9	2.5	-5.8	-4.5	-5.5	0.5

Source: Dakota Institute, Wells Fargo Economics, BEA

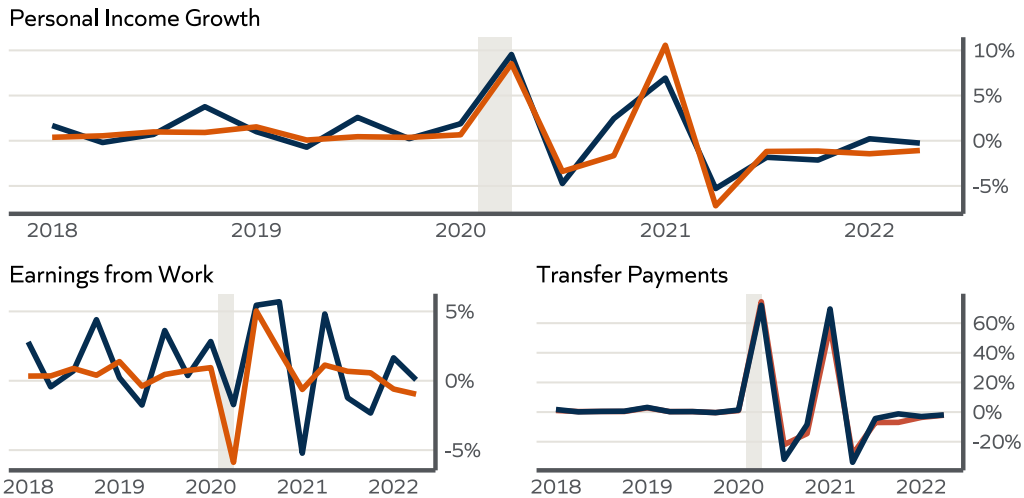
South Dakota has achieved the higher per capita income while having population growth roughly double that of the nation as a whole. However, a significant amount of the per capita income differential can be attributed to significantly higher labor force participation (68.7% in SD versus 63.2% US) and employment-to-population (67.1% in SD versus 60.1% US) rates. South Dakota ranks in the top four states, with North Dakota, Colorado, and Nebraska, in both measures.

Much of the personal income growth in both 2020 and 2021 is related to transfer payments, especially the stimulus payments in the second quarter of 2020 and first quarter of 2021. Transfer payments

increased by between fifty and seventy-five percent in both South Dakota and the nation in each of those quarters when compared to the prior quarter. Prior to the pandemic, both the state and nation had fairly stable low growth rates in transfer payments. The growth rates have become more stable again, but now at negative values reflecting the inability to keep up with inflation, some of which has been attributed to the stimulus payments, especially the 2021 stimulus.

South Dakota and US Personal Income Growth

Quarterly Changes in Overall Personal Income and its Components



Source: Dakota Institute, BEA.

Note: Growth rates are annualized percent changes in real quarterly income as reported by BEA. Earnings from work include wage and salary income plus contributions to insurance and retirement programs. Transfer payments include government payments to individuals through programs such as social security, medicare, and unemployment insurance. Proprietor's income is not displayed in the bottom panel of the figure but is included in the upper panel.

Earnings, a much larger component of personal income, have also varied significantly between the state and nation and over time. The volatile South Dakota farming sector fluctuated between small declines and sizable increases since 2016, with significant increases continuing into the first half of 2022. The U.S. farming sector also exhibited the same large increases in 2022, although earnings had not increased as much as in South Dakota prior to 2022. Nonfarm earnings increased in each year from 2017 to 2021, with the highest growth rate in 2019, prior to declining in both the first and second quarters of 2022. Earnings in current dollars increased slightly in the first quarter but not enough to keep up with inflation, while the inflation effect compounded a loss in current dollar terms in the second quarter. The South Dakota losses were similar to national trends.

Looking ahead to the remainder of 2022 and 2023, a simple forecasting model using prior-period growth and national GDP forecasts from the Federal Reserve Bank of Philadelphia's Survey of Forecasters predicts that South Dakota personal income will drop by 3.3% over 2022 before rebounding to 2.1% growth in 2023. The forecasts exceed national projections of a decline of more than five percent in 2022 and about one percent growth in 2023. Assuming continued population growth of just under one percent per year, per capita personal income is forecast to fall by about four percent in 2022 and grow by 1.3 percent in 2023. After the sharp rise in 2020 in real per capita income and a smaller rise in 2021, real per capita income had reached over \$69,000 (in May 2022 dollars). Given current forecasts, it will fall about \$3,000 in 2022 and remain under \$67,500 in 2023.

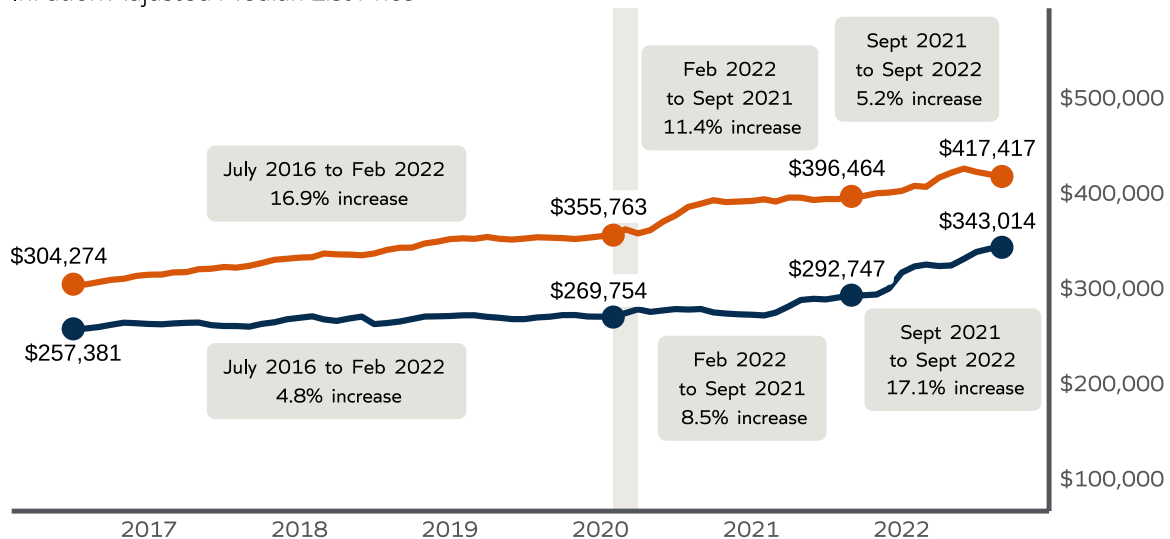
South Dakota Housing Costs Rising Faster than the Nation's

Housing | Aaron Scholl

While decades-high inflation has impacted almost every sector of the US economy, its most apparent effects are reflected in housing markets. South Dakota is no exception to this national trend in increased housing prices. In fact, over the last several years the SD housing market outpaced national trends in housing prices before and after accounting for these record inflation levels. In nominal terms (i.e. before accounting for inflation), the SD median home listing price soared 26.8% year-over-year from Q3 2021, compared to 13.9% at the national level. Adjusting for inflation figures, the SD housing market remained above national trends – growth of 17.1% in SD home listing prices compared to 6.4% at the national level, over the same period.

South Dakota and US Housing Costs

Inflation Adjusted Median List Price



Source: Dakota Institute, Realtor.com

Note: The list price does not reflect the final sale price which may be higher or lower than the listing price. All prices are inflation adjusted to 2022 dollar values and seasonally adjusted as well.

Higher listing prices likely underestimate the reality of prices growth in the market though. Available housing data reports only initial listing prices and not final sale prices of properties. Given that new home listings in SD increased 1.7% year-over-year, but declined 5.2% from Q2 2022 to Q3 2022 while listing prices continued to increase (3.8%), illustrate the demand for housing in SD far outpaced supply. This shortage in the SD housing market likely resulted in bidding wars where the successful strategy hinges on an offering price significantly higher than the initial listing price.

Pandemic induced effects (e.g. increased need for housing space, increased remote work, etc.), fewer properties available, and increased prices in SD housing provided significant leverage to sellers in the market. To provide some relief to potential homebuyers, the state of SD authorized significant increases in construction permits beginning in 2020. Year-over-year increases in the number of building permits issued from 2020 and 2021 were 48.1% and 15.6%, respectively. Further yet, new,

Housing Summary and Forecast									
	Actual							Forecast	
	2018	2019	2020	2021	2022:Q1	2022:Q2	2022:Q3	2022	2023
Building Permits (% YoY)									
SD	-13.5	-4.7	48.1	15.6	30.9	60.5	42.5	42.3	10.7
US	4.5	3.1	6.1	19.2	6.5	1.8	-5.9	4.0	3.0
Median List Prices (% YoY)									
SD	1.9	1.0	1.8	4.1	17.7	14.2	17.1	17.8	22.9
US	5.4	4.0	6.1	5.7	3.6	6.6	6.4	5.9	4.0
New Listings (% YoY)									
SD	0.1	4.3	-9.1	-5.5	-6.0	0.2	1.7	-2.4	1.5
US	-0.1	-1.7	-4.9	-1.0	-7.8	1.4	-9.8	-5.2	0.1
Affordability Index ¹									
SD	127	138	174	216	228	190	167	140	89
US	98	101	133	151	161	156	141	107	55

Source: Dakota Institute, Census Bureau, Realtor.com, Freddie Mac, BLS

¹ Affordability index is calculated using the [National Association of Realtors methodology](#).

privately-owned housing units authorized in 2022 grew 60.5% from their Q2 2021 numbers. While the national level also saw a general increase in construction permits authorized (year-over-year 1.8% since Q2 2021), SD figures soared beyond national construction activity. As prices persisted, the Federal Reserve took a more aggressive approach to “correct” the current national housing market situation – sharply higher mortgage rates.

While the Fed does not directly control mortgage rates, or the cost of financing home, they do control the Federal Funds Rate, which indirectly influences mortgage rates. The average 30-year fixed mortgage rate achieved 6.7% at the end of Q3 2022, twice as high as the 2.96% average in 2021. As of writing, this same borrowing rate sits at 7.08%. The effects of this policy are twofold. The first, and immediate effect, is reduced affordability in monthly mortgage payments. The second, and longer-term effect, is reduced housing prices – as potential homebuyers evaluate financing costs associated with higher mortgage rates, the marginal homebuyer is driven out of the housing market. As demand falls, remaining sellers lose their high-priced leverage (i.e. seller’s market), and are required to negotiate lower prices with remaining buyers.

To illustrate the implications of significantly higher mortgage rates, focus on monthly costs – the average principal and interest payment on the median-priced home in SD, assuming a 20% down payment, increased 62.2% (47.0% in the US) in Q3 2022 year-over-year. To translate this further, the same median-priced house in SD (US) purchased in Q3 2022 instead of Q3 2021 would result in an increased principal and interest payment of \$372 per month (\$509 nationally). As the Fed is expected to increase and maintain high rates through the end of 2023, expect these figures to play a large role in purchasing real-estate in the next several years.

Overall while the national housing market has begun its “correction” as indicated by the Federal Reserve, expect the SD housing market to remain strong. Even as mortgage rates more than doubled throughout the first three quarters of 2022, year-over-year growth indicated that SD building permits issued continued to increase, new listings remained steady, and SD listing prices grew (3.8%) despite an opposing national trend (-1.6%) from Q2 to Q3 of 2022. While the supply-side of the housing market will adjust more slowly to increased financing costs, expect underlying demand to remain strong in the housing market. It appears that potential homebuyers are ready and waiting for homeownership opportunities in SD even in the face of declining affordability conditions.

The Labor Shortage is Real But Don't Blame Quiet Quitting

Labor Force | Jared McEntaffer

The US labor market has spent most of 2022 ignoring any warnings about economic slowdowns. Employment growth and job creation have been at multi-decade highs through much of the post-pandemic period, and labor markets remained stubbornly robust through first three quarters of 2022. There are signs that the combined weight of interest rate hikes, rising production costs, falling productivity, and the prospect of looming recession may have finally slowed the pace of hiring in the fourth quarter, but any widespread slowdown will not fully appear until 2023.

The post-pandemic recovery of the US labor market has been unprecedented. Monthly employment growth at the national level was consistently higher than they have been at any time in the last fifty years. National employment growth averaged 4.2% over the first three quarters of 2022, but the labor market has started turning. Unusually, Silicon Valley appears to be leading the way into the downturn, with tech giants such as Meta (the parent company of Facebook), Twitter, and Amazon announcing tens of thousands of layoffs. The construction and real estate sectors, which are traditionally more likely to first signal labor market slowdowns, have also slowed in recent months as higher interest rates have put the breaks on housing demand, but the official data are running behind the news at this point and it may take some time for the direction change to be reflected in the employment data. In any case, we forecast 3.1% employment growth for 2022, but we anticipate the economy will spend most of 2023 making up lost ground and end the year flat.

Labor Force Summary and Forecast									
	Actual							Forecast	
	2018	2019	2020	2021	2022:Q1	2022:Q2	2022:Q3	2022	2023
Employment Growth (% YoY)									
SD	1.0	0.5	-2.2	2.3	2.1	1.9	2.6	2.8	1.2
US	1.6	1.3	-6.1	4.7	4.5	4.3	3.9	3.1	0.0
Unemployment Rate (%)									
SD	2.8	2.7	3.5	2.9	2.5	2.3	2.3	2.3	2.8
US	3.9	3.6	6.7	3.9	3.6	3.6	3.5	3.8	4.9
SD Labor Market Indicators (1,000s)									
Job Openings	23.3	22.0	19.2	30.8	35.0	34.3	28.9	28.8	22.5
New Hires	18.2	17.3	17.2	20.2	19.3	19.0	20.4	19.2	18.4
Job Quits	10.5	10.6	8.9	11.8	13.0	12.0	11.0	10.9	9.8

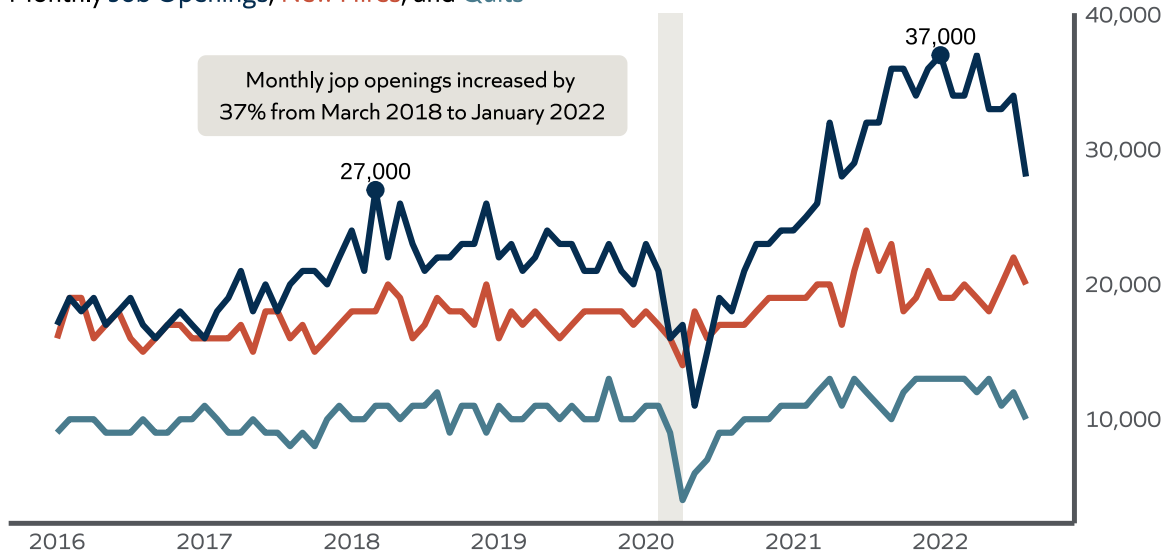
Source: Dakota Institute, Wells Fargo Economics, BLS

South Dakota's employment picture was similar to the nation's but was both more muted and more extreme. South Dakota's employment growth from 2021 through Q3 2022 averaged 2.2% versus 4.3% at the national level, and the state's unemployment rate fell by 1.2 percentage points versus 3.2 percentage points for the US overall. In truth, South Dakota fared better than the nation during 2020 so there was less ground to make up, and the relatively slow employment growth reflected that fact.

On the other hand, though, the biggest story for South Dakota in 2022 was the worker shortage and labor market tightness. In fact, the limiting factor on employment growth appears to have been labor availability rather than potential economic slowdown or rising interest rates.

South Dakota Labor Market Dynamics

Monthly Job Openings, New Hires, and Quits



Source: Dakota Institute, BLS

The Bureau of Labor Statistics (BLS) produces the Job Openings and Labor Turnover Survey (JOLTS) data series that reports on state-level employment dynamics. The tight labor market can be seen by job openings outnumbering new hires in all but two months since January 2017. Market tightness increased even further in mid-2020 as job openings grew at their fastest rate since the survey began in 2001. Employers were desperate for workers and hiring rose initially. By Q4 2021 the number of new hires had fallen to 19,300 per month from an average of 20,400 per month in Q1-Q3. Hiring would remain at this slightly lower level up until Q3 2022 when it picked up slightly.

One way to assess labor market tightness is to look at the ratio of job openings to unemployed workers. When this ratio is greater than one, it means there are more job openings than there are unemployed workers to fill open positions. Throughout 2022 the ratio of job openings to unemployed workers at the national level was roughly 2 to 1, i.e. there were 2 open jobs for each unemployed worker. In contrast, South Dakota's job opening to unemployed worker ratio during 2022 was 3 to 1.

If that wasn't enough, South Dakota's unemployment rate in 2022 has been lower than at any time in the last fifty years. This bears repeating. South Dakota's unemployment rate in 2022 was lower than at any time in fifty years, and there were three job openings available for each unemployed worker. A partial solution to labor shortages can be found in workers taking on additional jobs, but this isn't an ideal solution and there may be little capacity for it in South Dakota at this point.

BLS previously published an annual labor market review that reported on multiple job holders. The most recent report looked at 2015 labor market data and found the share of workers in South Dakota who held multiple jobs was 9.1%, the highest in the nation. South Dakota also had the highest share of multiple job holders in 2014, 2013, 2012, 2011, and 2010.

To recap, historically low unemployment, historically high demand for workers, and more people are already working multiple jobs than in other states. Employers are right. There is a labor shortage, and it may be holding the state economy back from its growth potential. The labor shortage isn't caused by people sitting on the sidelines, though. The labor shortage is a people shortage.