

ECONOMIC OUTLOOK

QUARTERLY REPORT

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Abstract

The Economic Outlook quarterly report uses the North Dakota Forecast Model developed by the NDSU Center for the Study of Public Choice and Private Enterprise to predict economic trends for the state of North Dakota and its three largest metropolitan statistical areas: Fargo, ND-MN; Bismarck, ND; and Grand Forks, ND-MN. The model uses past trends and empirical relationships in data to predict (forecast) future trends. These forecasts focus on key economic indicators such as wage growth, labor force participation, unemployment, and the housing price index. Like all forecast models, this method faces limitations and the specific values in the forecast should not be direct cause for decision-making. Rather, forecasting provides information about what is possible and can help establish expectations. The Economic Outlook report is released each quarter with updated data from the forecast model.

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Introduction

The Center for the Study of Public Choice and Private Enterprise has developed a forecast model to showcase the economic outlook for the state of North Dakota and its three largest metropolitan statistical areas: Fargo, ND-MN; Bismarck, ND; and Grand Forks, ND-MN. This report details the results of the model for the third quarter of 2021 (2021q3).

The forecast focuses on key economic indicators such as wage growth, labor force participation, unemployment, and the housing price index. The data used to create these forecasts come primarily from the St. Louis Federal Reserve. Each figure illustrates the model's projections with each panel showing both the actual forecast and the 90% confidence interval around the forecasted number. A 90% confidence interval shows the upper and lower limits of the projections with 90% certainty. This means that, statistically, we can be 90% confident that the value in the given quarter will fall between the upper and lower CI limits. Interconnected variables are incorporated into the model to demonstrate how state-level conditions impact predictions for metropolitan areas and how commodity price projections impact economic conditions. All projections are based on the trends of the past few quarters. As explained below, a forecast model does not and cannot account for unforeseen factors and changes that may affect economic performance. For more information about the North Dakota Forecast Model, see the accompanying technical appendix.

Limitations

Forecasting has long been a mainstay in the field of economics. It conveys much needed information about the world and trends in economic variables that can be useful for public and private decision-makers. However, it is important to acknowledge the limitations of any forecast. There are many reasons a forecast model may not produce correct predictions. The model uses historical data and past trends to predict (forecast) future trends. As a result, unexpected changes in economic conditions, public policy, or other factors may disrupt the accuracy of the forecasts. Similarly, the model cannot incorporate all of the complexity and uncertainty surrounding an economic system.

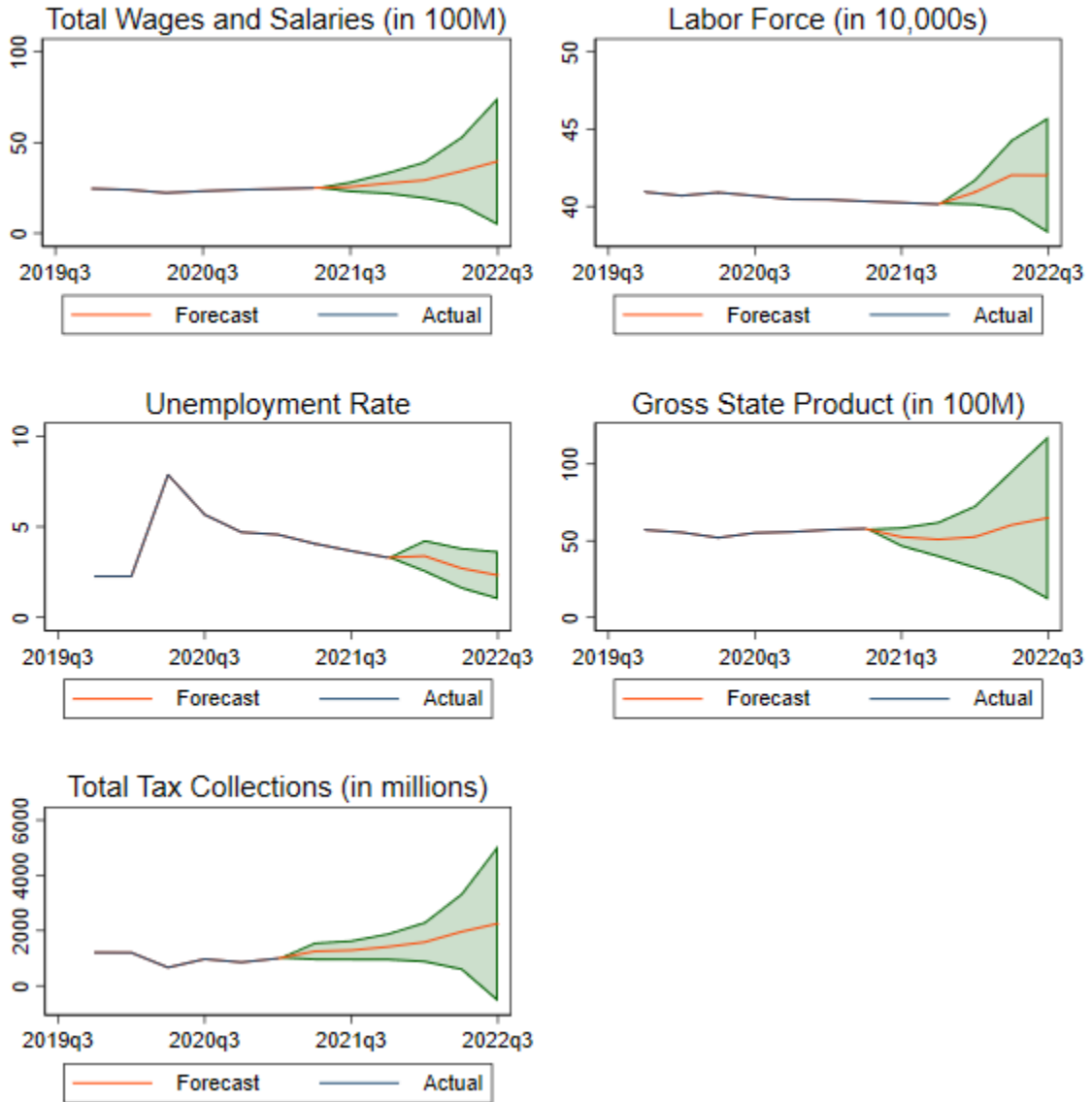
Key Points

- The North Dakota outlook shows signs of economic recovery and growth for 2022. This includes growth for wages and salaries in the state, as well as a growing labor force, decreasing unemployment, and strong total tax collections. Gross state product is looking weak in the coming quarters but should move back to growth in the middle of 2022.
- The economic outlook for North Dakota's metro areas is positive, with wages and the labor force forecast to grow in Fargo, ND-MN; Bismarck, ND; and Grand Forks, ND-MN.
- This report represents forecasts based on the most recently available data when the model was run on December 6, 2021. These forecasts serve as a projection for how the economy will respond to current economic conditions based on historical data and trends.

Quarterly Outlooks

Figure 1

North Dakota Quarterly Outlook



North Dakota Outlook

The overall economic outlook for the state has improved compared to the previous report. The risks of declining labor force have disappeared from the forecast, and the labor force is now projected to grow. However, there is still lingering risk of a decline in North Dakota's gross state product.

Total wages and salaries have recently been growing about 2 percent per quarter. This growth trend is forecast to continue and possibly pick up in the third quarter of 2022 (2022q3). The labor force has declined slightly, losing about three-fourths of a percent over the past year. This trend is forecast to reverse and turn into growth as 2022 begins. Similarly, the state unemployment rate is forecast to continue its downward trend, possibly hitting pre-pandemic levels in late-2022. North Dakota's gross state product (GSP) is forecast to decline as we head into 2022. These losses are forecast to be made up by growth throughout 2022. Total tax collections are predicted to remain stable through 2021 and then pick up in 2022. The confidence interval surrounding tax collections remains large, demonstrating continued uncertainty in the economic recovery.

Alternative Scenarios for North Dakota

Because the North Dakota economy is heavily tied to petroleum extraction, we produced forecasts for the state under several different scenarios for the WTI price of crude oil to compare against the baseline path for crude oil as set by the forecast model. Scenarios for the path of the WTI crude price were: the upper bound of the 90% confidence interval, a 10% quarterly growth rate, a 10% quarterly decay, and the lower bound of the 90% confidence interval.

Figure 2 replicates the panels in Figure 1 with the addition of a graph for the different WTI price scenarios. Each line represents the path of forecasted variables under the different price scenarios.

Alternative Outlooks

These graphs demonstrate that North Dakota's current economic path is not highly dependent on crude oil price fluctuations. The greatest impact of oil price trends is on total tax collections and gross state product. Each of these have continued forecast growth even under worse-case crude price scenarios. Other forecast indicators are less influenced by potential crude price trends. The red lines in Figure 2 represent the worst-case scenario with the WTI price falling to the 90% lower bound of its projected confidence interval (a near zero price). The green line represents the 90% upper bound of its projected confidence interval. The maroon line represents a 10% rate of decay for the WTI price, and the dark blue line represents a 10% growth rate.

Figure 2

North Dakota Quarterly Outlook - Alternate Scenarios

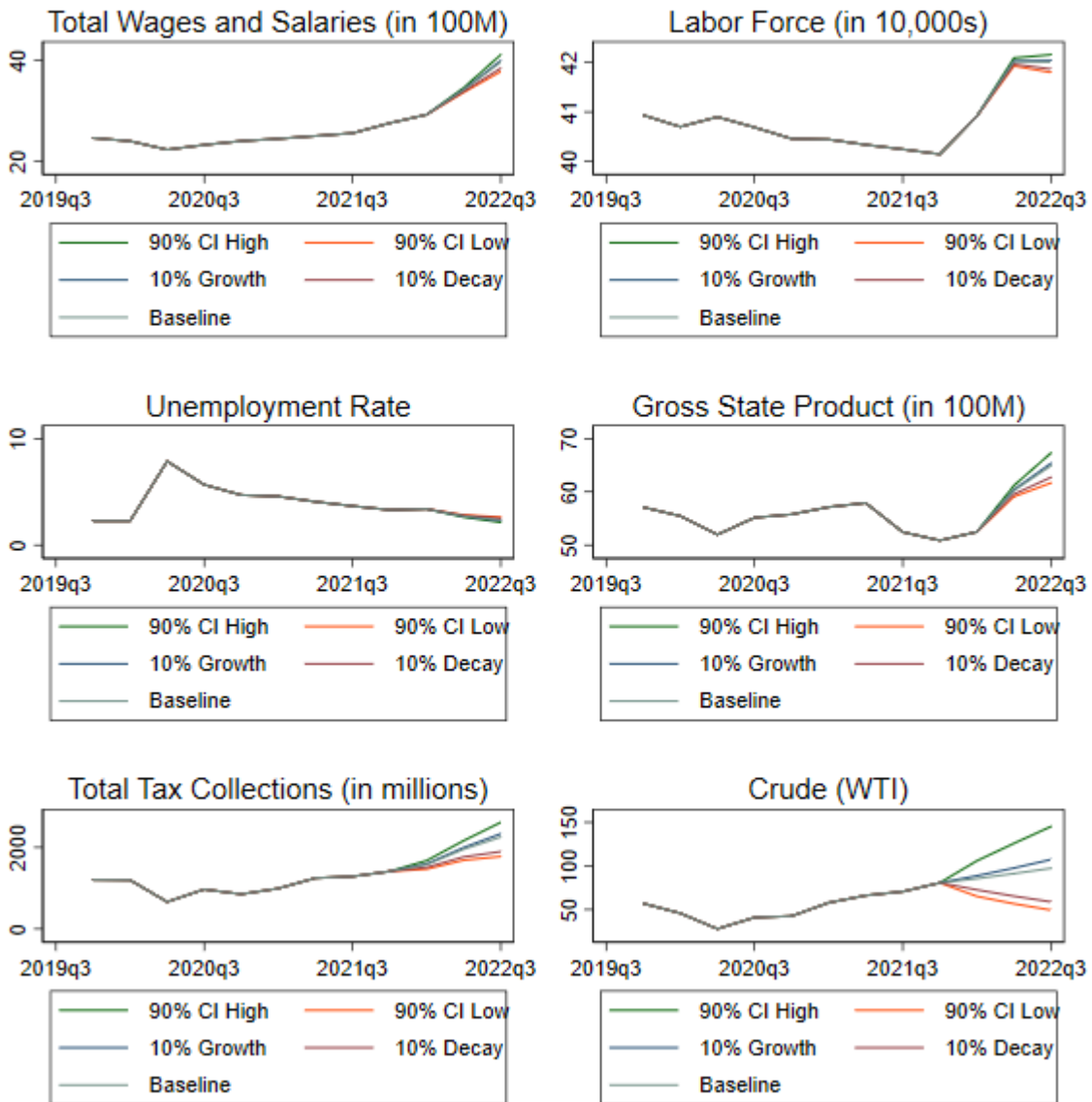
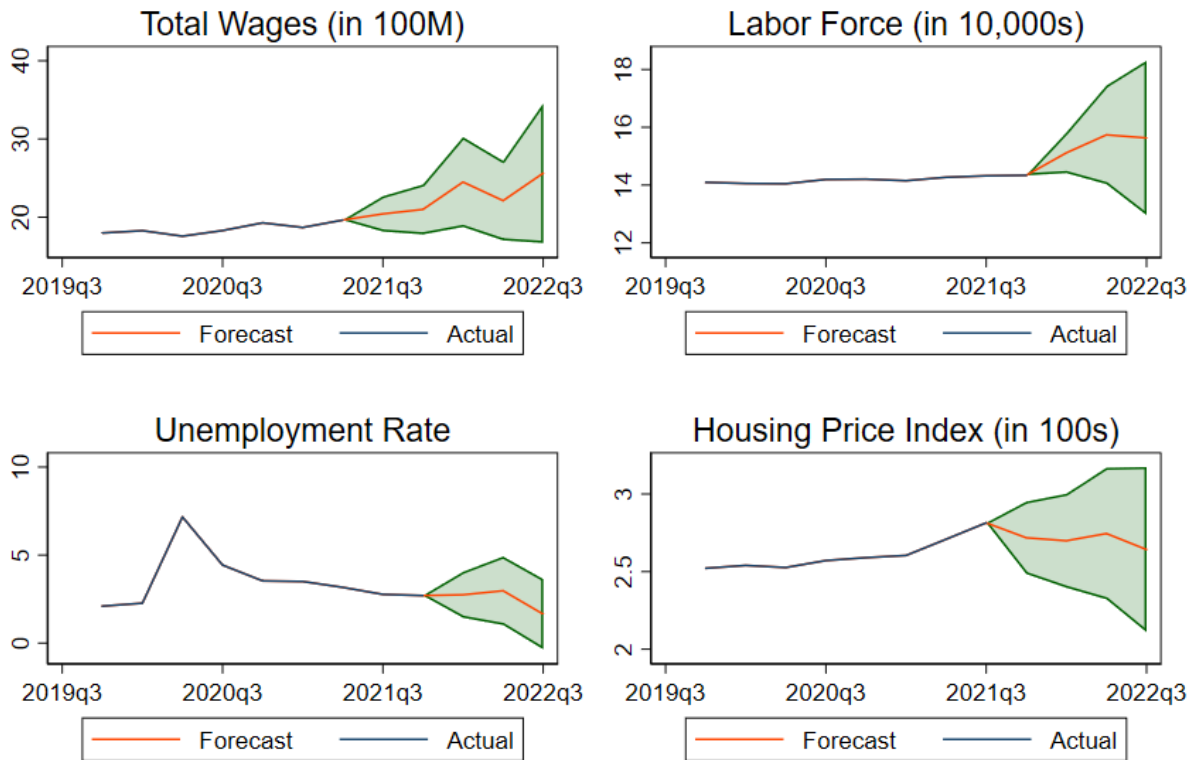


Figure 3

Fargo Quarterly Outlook

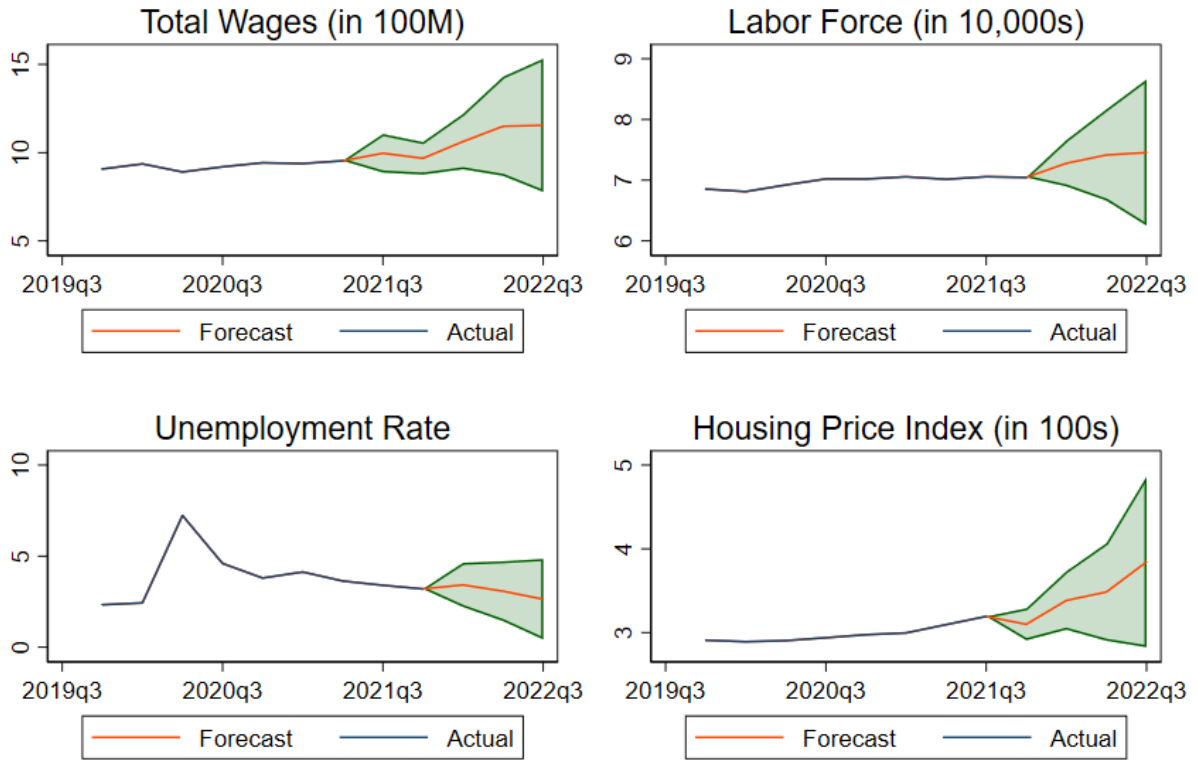


Fargo, ND-MN Outlook

Figure 3 shows a positive economic outlook for Fargo, ND-MN. Total wages grew by 5 percent in the second quarter of 2021 (2021q2). This growth trend is expected to continue through 2022. The Fargo labor force (the total number of people employed plus those seeking employment) has remained flat throughout 2021, but it is expected to recover in 2022. While the labor force is growing, the unemployment rate is expected to hold relatively constant and then fall in the third quarter of 2022 (2022q3). The unemployment rate for 2021q3 was 2.77 percent, which is down from 3.17 and 3.5 percent in the previous quarters. The Fargo unemployment rate may soon be back to pre-pandemic levels. The Fargo housing price index has experienced growth in 2021 compared to a flat trend in 2020. It is forecast to experience a slight decline over the next year.

Figure 4

Bismarck Quarterly Outlook

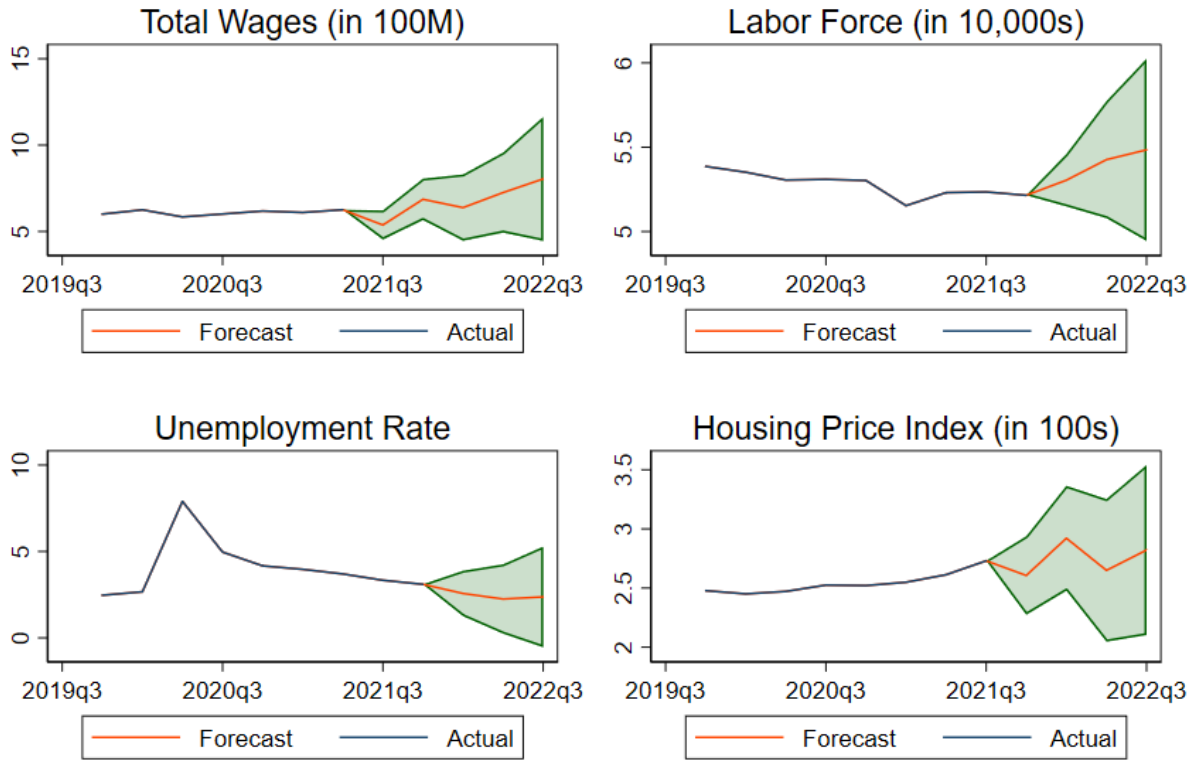


Bismarck, ND Outlook

The Bismarck, ND, metro area has a positive economic outlook. Total wages increased by just over 1.5 percent in the second quarter of 2021 (2021q2), and they are expected to rise into the next year. The size of the labor force is forecast to grow in 2022 after holding in 2021. The unemployment rate is currently 3.2 percent, which is down from 3.4 percent and 3.63 percent in 2021q3 and 2021q2, respectively. The unemployment rate is forecast to continue this decreasing trend and may soon reach pre-pandemic levels. The Bismarck housing price index grew by just over 3 percent in the third quarter of 2021 (2021q3). This growth is expected to continue over the coming year.

Figure 5

Grand Forks Quarterly Outlook

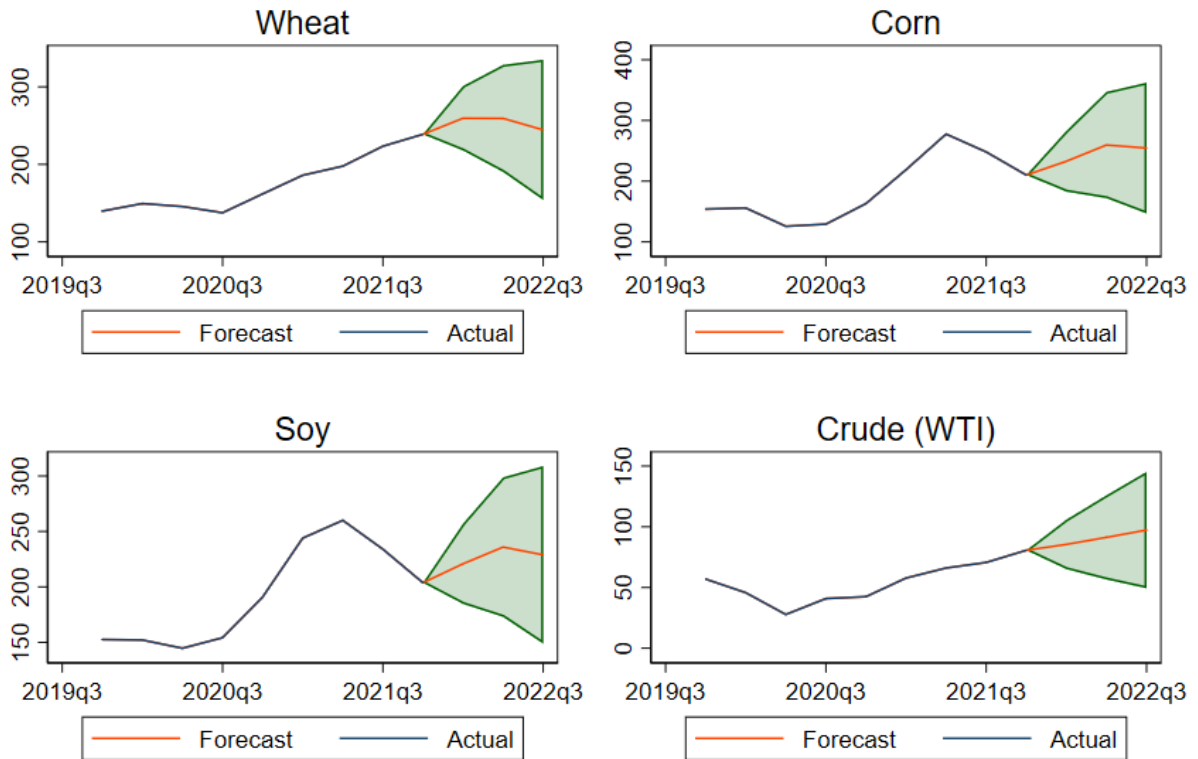


Grand Forks, ND-MN Outlook

The Grand Forks, ND-MN, metro area has a positive outlook. While total wages are expected to fall in the fourth quarter of 2021 (2021q4), they are also forecast to grow quickly in 2022. The Grand Forks, ND-MN, labor force has declined during the past year but is expected to grow in the first three quarters of 2022. The unemployment rate is currently 3.1 percent, which is down from 3.3 percent and 3.7 percent in recent quarters. The unemployment rate is expected to continue this decreasing trend. The Grand Forks housing price index experienced strong growth in recent quarters. However, the forecast has some volatility and is expected to remain relatively flat over the coming year.

Figure 6

Commodity Quarterly Outlook

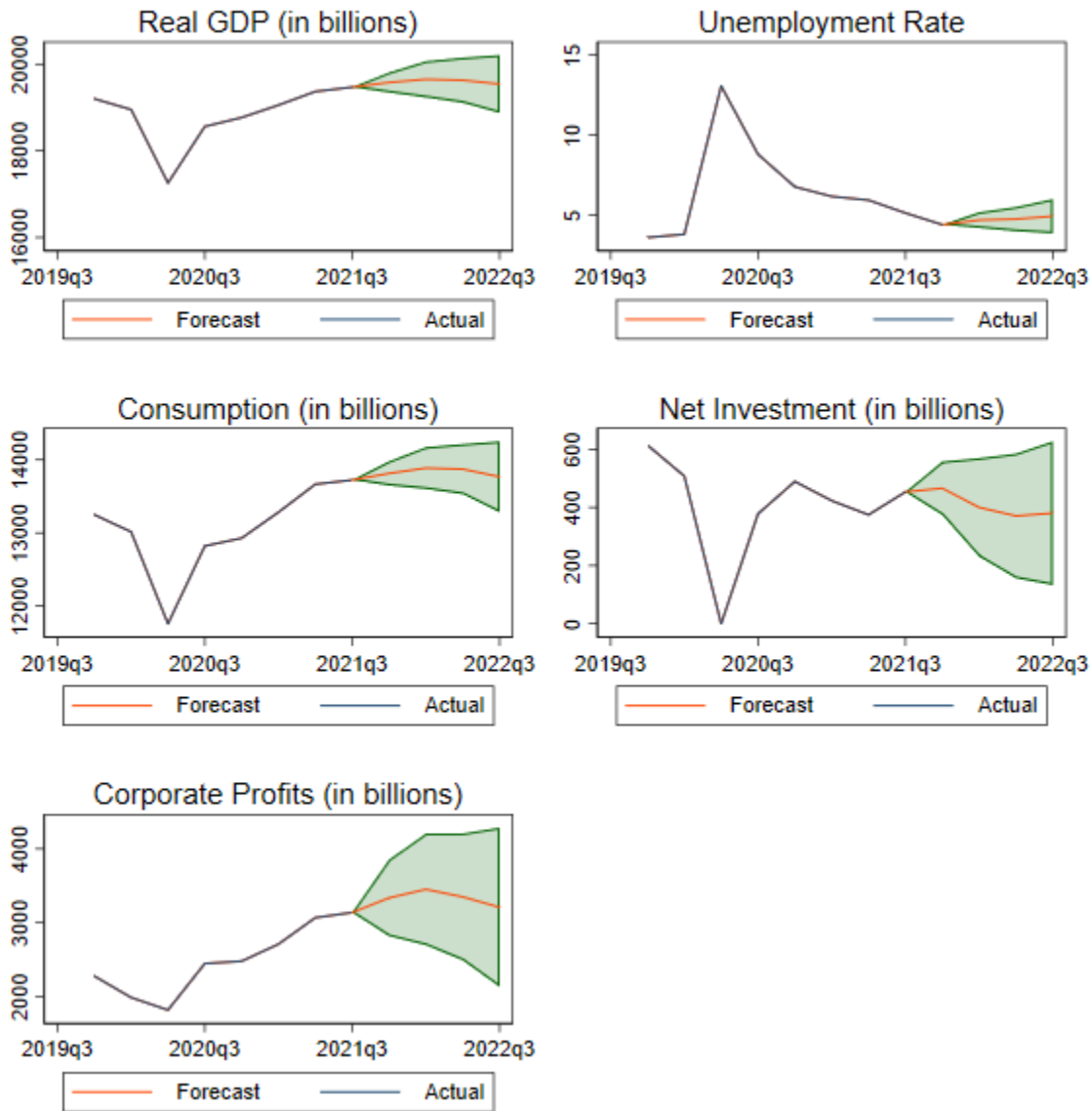


Commodity Outlook

Commodity price indices seem to have peaked in the second quarter of 2021 for corn and soy with a peak approaching for wheat. All commodity prices are projected to follow a growth trend for the coming year. However, growth patterns are more measured than in the previous report. This is especially true for soy. The model uses a producer price index for wheat, corn, and soy prices. A producer price index measures the average changes in prices received by domestic producers for their output. The price of crude is the average daily price of West Texas Intermediate (WTI) futures contracts. The confidence intervals surrounding all commodity price trends are large, reflecting a high level of uncertainty in pricing trends. Although crude oil prices are improving, the market remains highly volatile and subject to substantial price risk.

Figure 7

National Quarterly Outlook



National Outlook

The above charts display the national quarterly outlook. The first chart, Real GDP, is the inflation-adjusted value of the goods and services produced by all labor and assets in the United States. Real GDP increased by 0.52 percent in the third quarter of 2021 (2021q3) and is predicted to grow by 0.56 percent in the fourth quarter (2021q4). This mild growth trend is forecast to continue. The unemployment rate is currently at 4.4 percent. However, the trend in the national unemployment rate is expected to grow, albeit slightly, over 2022. Consumption grew by 0.43 percent in 2021q3. This growth is expected to continue and then taper off into 2022.

Net investment (the total amount of investment in capital by the business sector used to expand the capital stock) is expected to grow in the fourth quarter of 2021 (2021q4) before declining into 2022. Corporate profits have been growing in 2021, but this growth is expected to slow down throughout 2022.

Summary

The forecasts in this report use historical data to predict future trends. The model used to generate the forecasts was run using data available on December 6, 2021.

North Dakota

Economic forecasts for North Dakota continue to highlight an economy that has the potential for economic growth. Forecasts show an increasing labor force and growing wages and salaries, which demonstrate a potential to return to economic growth. Trends for total tax collections remain strong.

Fargo, ND-MN

The Fargo, ND-MN, metro area is showing signs of economic growth. Wages and the labor force are forecast to follow a growth trend.

Bismarck, ND

The Bismarck, ND, metro area is showing signs of economic growth. Wages and the labor force are forecast to follow a growth trend, and the housing price index is projected to increase.

Grand Forks, ND-MN

The Grand Forks, ND-MN, metro area is showing sign of economic growth. Wages and the labor force are forecast to follow a growth trend.