ECONOMIC OUTLOOK

QUARTERLY REPORT

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Prepared by

Jeremy Jackson, Ph.D.
Director, Center for the Study of Public Choice and Private Enterprise
Associate Professor, Department of Agribusiness and Applied Economics
North Dakota State University
Email: jeremy.jackson@ndsu.edu

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 second quarter of 2020 (2020q2).

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

o   Due to the use of historical data and lags in the model, this forecast does not include recent changes to economic conditions brought on by the coronavirus pandemic.

o   This report represents forecasts based on the most recently available data when the model was run in April 2020. (For some series, the most recently available data is from 2019.) These forecasts serve as a baseline for how the economy was projected to grow before the economic shocks brought on by the pandemic.

o   To see updated forecasts that incorporate economic shocks in national unemployment and falling oil prices, read the Economic Outlook Special Report: A forecast of the effect of COVID-19 on North Dakota.

Quarterly Outlooks

Figure 1

North Dakota Quarterly Outlook
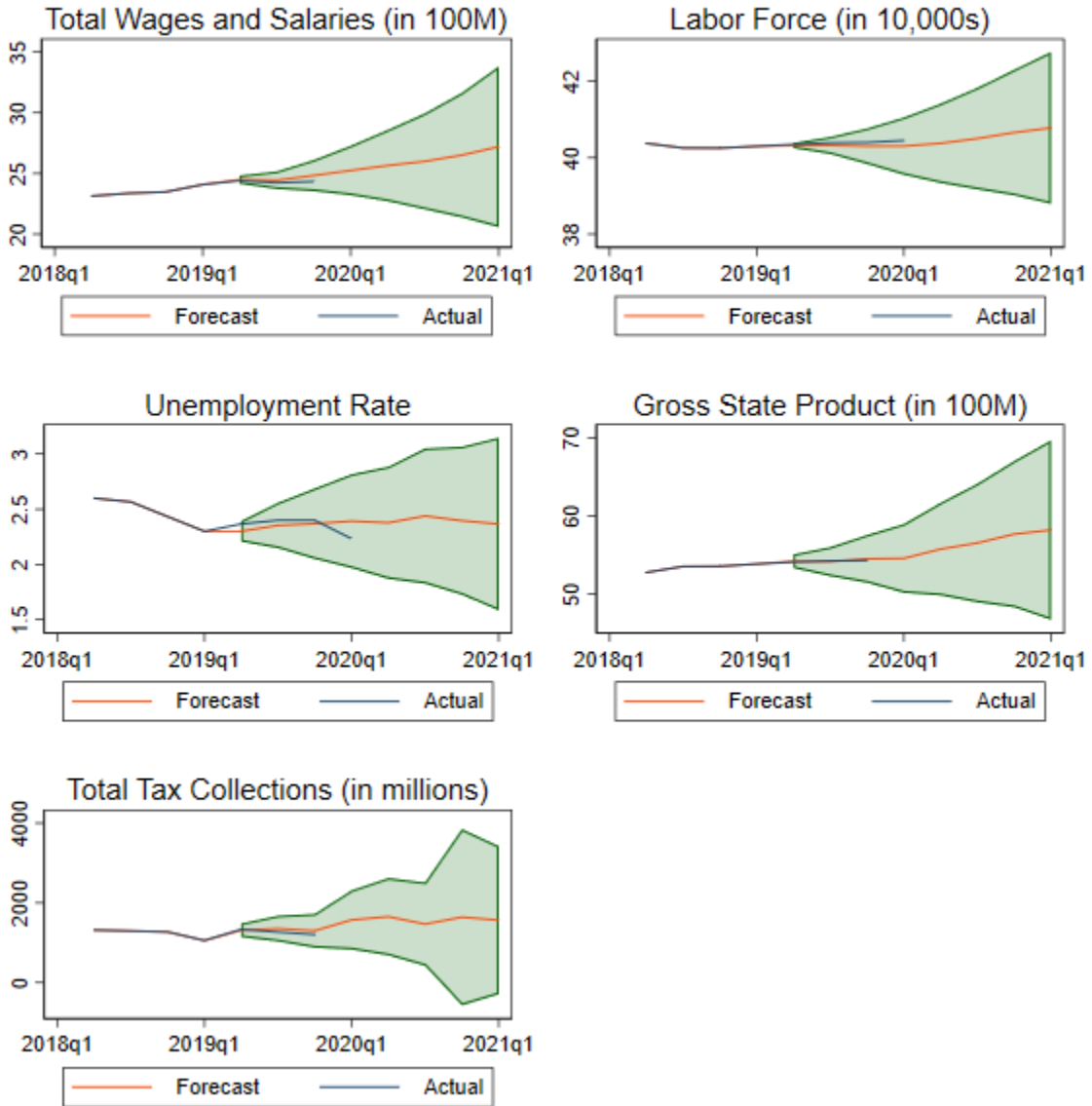
North Dakota Outlook

The model projects a positive economic outlook for North Dakota over the next year. Total wages and salaries are forecasted to increase at greater rates throughout 2020. The labor force is predicted to exhibit little change in the coming quarters, and the unemployment rate for the state is projected to decline from its already low value of 2.25 percent (2020q1). This shows strength in the labor market. The actual unemployment rate rose at the end of 2019, but it began to decline along with the forecast in the first quarter of 2020 (2020q1). North Dakota's gross state product (GSP) is forecasted to increase from its most recently reported value of $54.22 billion. The growth is projected to increase at accelerating rates through 2020; this is in line with projections for national GDP (see National Outlook). All of these projections combine with additional factors to impact total tax collections. Tax collections are expected to show signs of slower growth in the early quarters of 2020 but remain constant and grow slightly through the beginning of 2021.

Alternative Scenarios for North Dakota

Because the North Dakota economy is so 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 percent confidence interval, a 10% quarterly growth rate, a 10% quarterly decay, and the lower bound of the 90 percent 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.

Figure 2

North Dakota Quarterly Outlook - Alternate Scenarios

Alternative Outlooks

Changes in the price of crude oil can have large impacts on key North Dakota variables. Unsurprisingly for North Dakota, but contrary to the national economy, higher oil prices positively influence variable trends with lower prices having adverse effects. Of particular interest are the red lines representing what would happen if the WTI price falls to the 90% lower bound of its projected confidence interval. This is the scenario that most closely corresponds to the current collapse in oil-prices, and it demonstrates some of the negative impacts of the pandemic that are more fully reported on in the Economic Outlook Special Report.

Figure 3

Fargo Quarterly Outlook
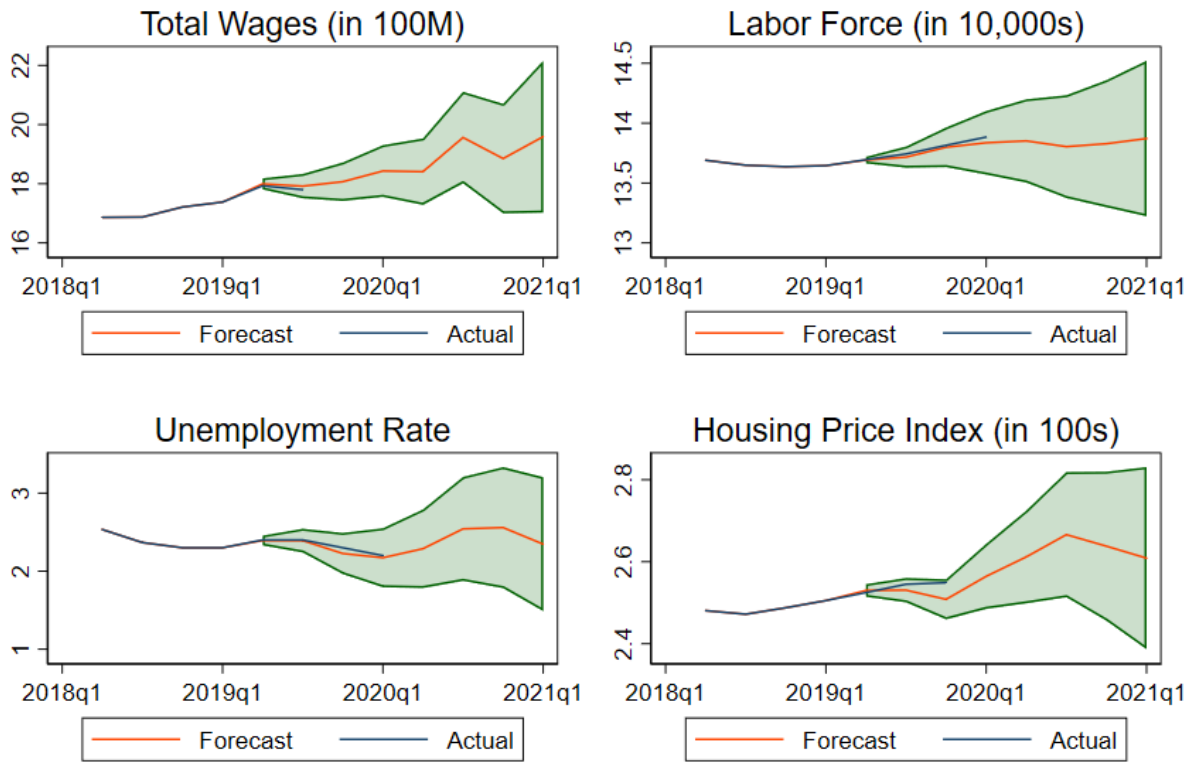
Fargo, ND-MN Outlook

The overall economic outlook for Fargo, ND-MN, is positive. Total wages are forecasted to grow over the next year, with projected quarterly growth rates between 1 and 3 percent. The Fargo labor force (the total number of people in the area working) is projected to remain constant over the next three quarters. The relative strength of the Fargo economy and labor force is further illustrated by an unemployment rate that is continuing to trend downward through the remaining quarters of 2020. At just over 2 percent, the unemployment rate in Fargo is low, and over the next few quarters, it is projected that decline further, though moderately. The last economic indicator – Housing Price Index – measures price changes of residential housing, showing the strength of the housing market in the area. Over the next few quarters, the housing price index is expected to rise consistently on a quarterly basis. The substantial growth looks to nearly match the strong rate of growth of the total quarterly wage index. Overall, these projections indicate that the Fargo economy is forecasted to continue on its relatively strong growth trajectory with lower unemployment, stronger wages, and a better housing market over the next few quarters.

Figure 4

## Bismarck Quarterly Outlook
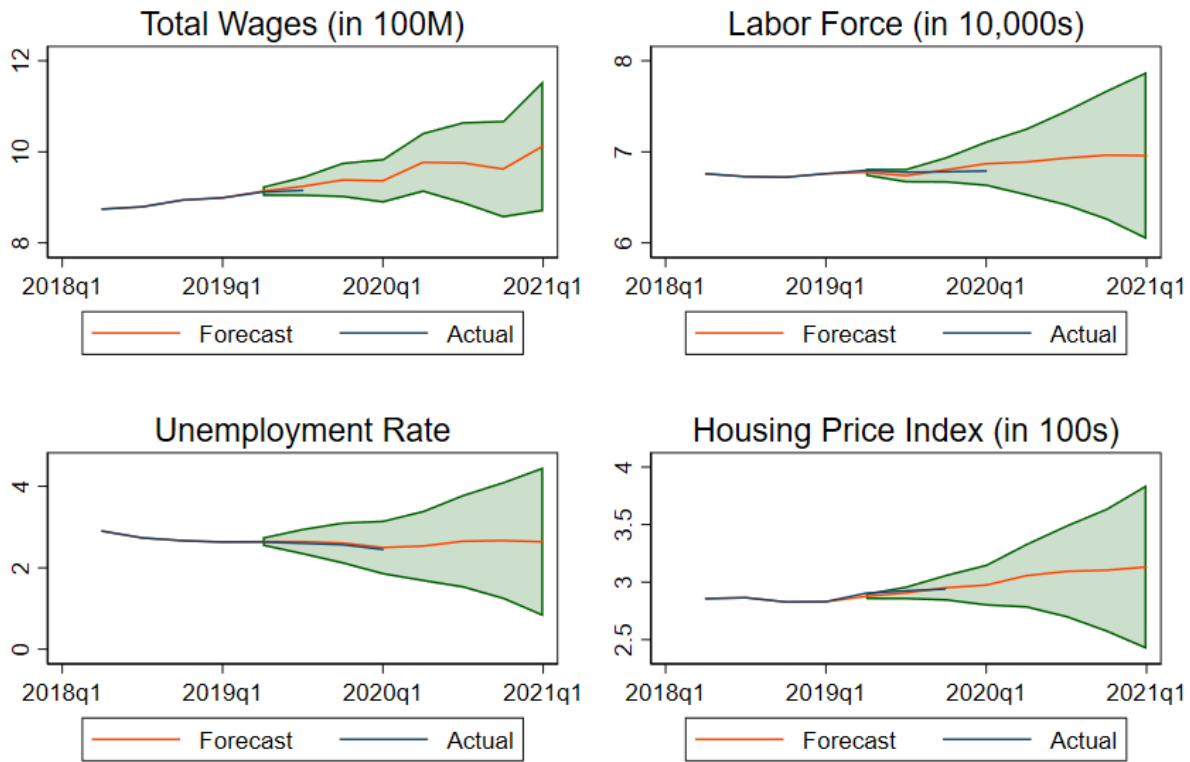
Bismarck, ND Outlook

The Bismarck, ND, metro area also has a positive economic outlook, though it is somewhat more measured than the other metro areas analyzed in this report. Total wages are projected to increase across throughout 2020 from the last reported value of $915 million in the third quarter of 2019 (2019q3). Beginning in 2020, total wages are predicted to fluctuate slightly with an overall positive trend line. The Bismarck labor force is forecasted to remain constant through the next three quarters at just under 70,000 people. The unemployment rate in Bismarck remains low, similar to the state's other metro areas. Based on historical data, the unemployment rate for Bismarck, ND, is expected to change relatively little, remaining flat over the next two quarters with the potential for a slight decrease later in 2020. The area is forecast to see a positive increase in the housing market for the rest of 2020. When compared to Fargo or Grand Forks, the economic outlook for Bismarck, ND, show slower and less robust, although still positive, economic growth.

Figure 5
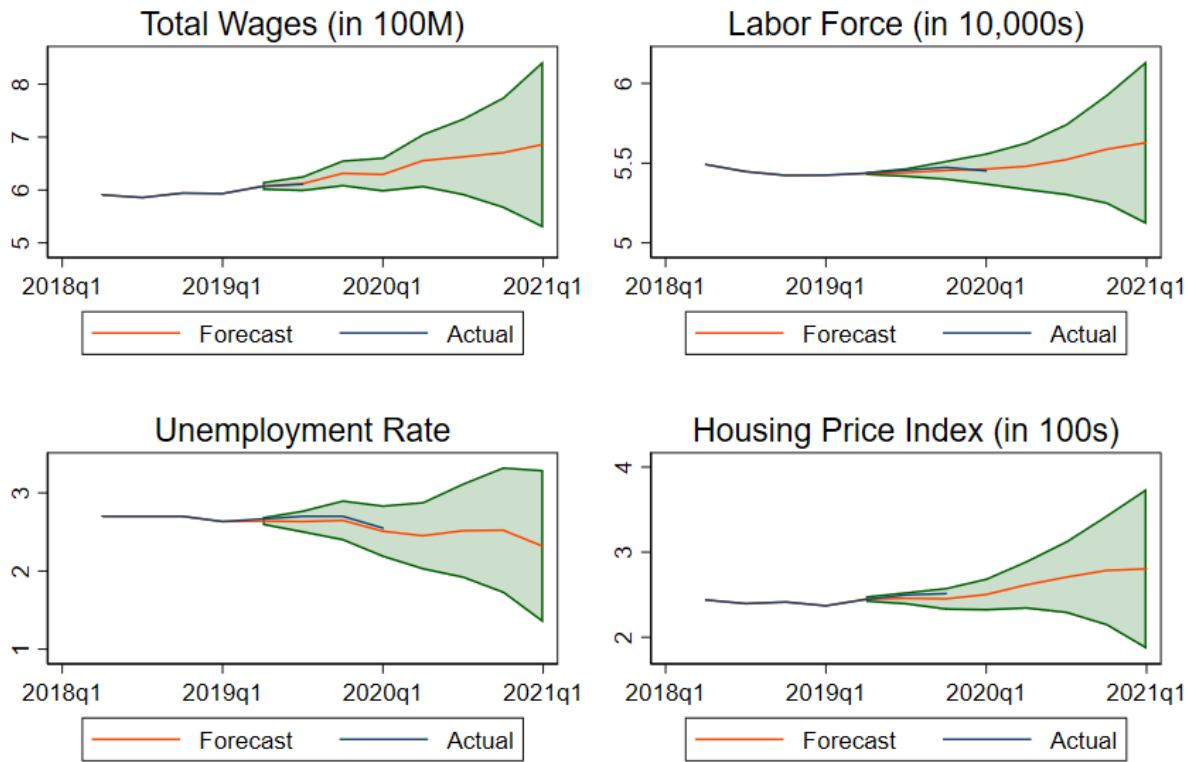
Grand Forks, ND–MN Outlook

Similar to the other metro areas, the forecast projects positive growth for the economic outlook in Grand Forks, ND-MN. Total wages are projected to increase from the most recent value of $611 million, but at a slower rate than in Fargo, ND-MN. There does not appear to be a smooth upward trend in the projections; some short-term reductions in growth are possible. One potential drag on improved economic strength in the Grand Forks, ND-MN, metro area can be seen in the labor force size forecast. Over the next few months, this model projects a slight decline in the size of the labor force. However, the actual values through the first quarter of 2020 (2020q1) are above the projections to date, which is a positive sign. The unemployment rate is forecasted to decrease. With an already low 2.6 percent unemployment rate, additional decreases in the rate show a strong labor market. Finally, the housing price index in Grand Forks, ND-MN, is forecasted to increase slightly during the remaining quarters of 2020.

Figure 6

Commodity Quarterly Outlook

Wheat
### Corn
Soy
Crude (WTI)
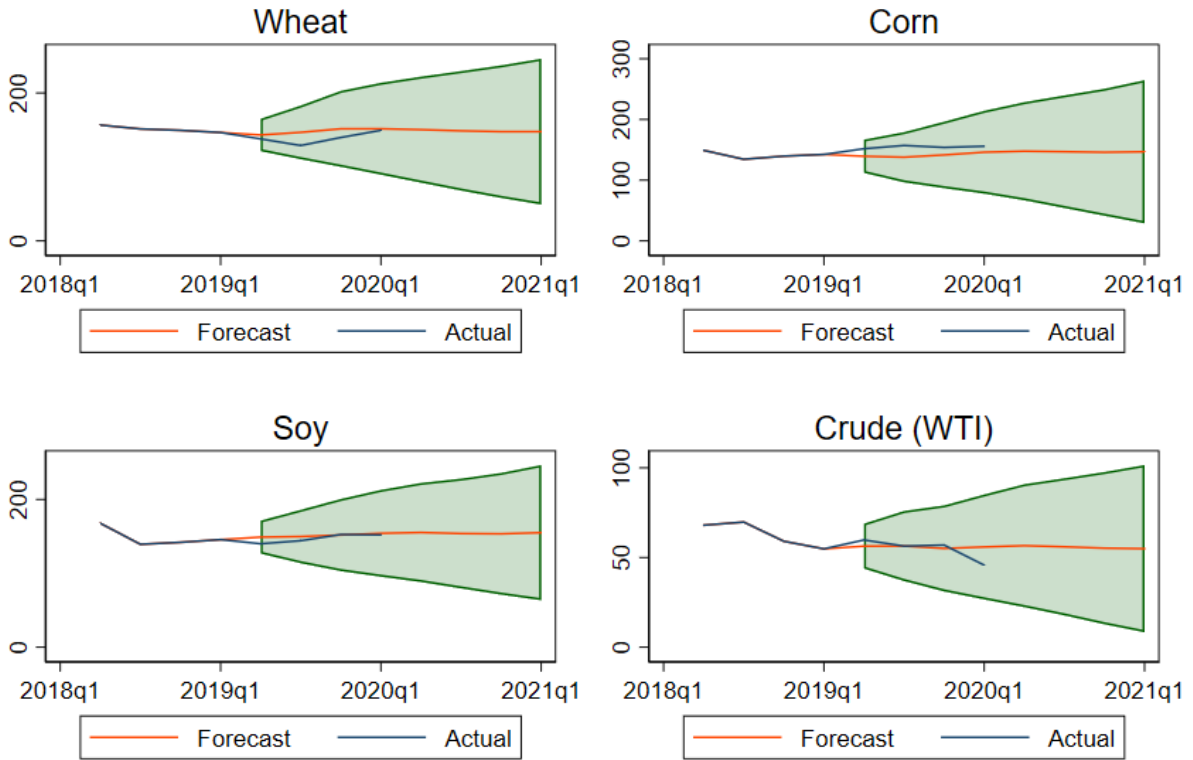
Commodity Outlook

Commodity values are not forecast to change significantly over the next year. This model uses a producer price index for each of the commodities to make its predictions. A producer price index is an index that measures the average changes in prices received by domestic producers for their output. Over the next few quarters, none of the commodities in this forecast (WTI crude, soy, wheat, or corn) – show significant changes in the producer price index. This means prices for producers are forecast to remain constant, and revenues generated from commodities should be expected to remain relatively unchanged.

Figure 7

National Quarterly Outlook
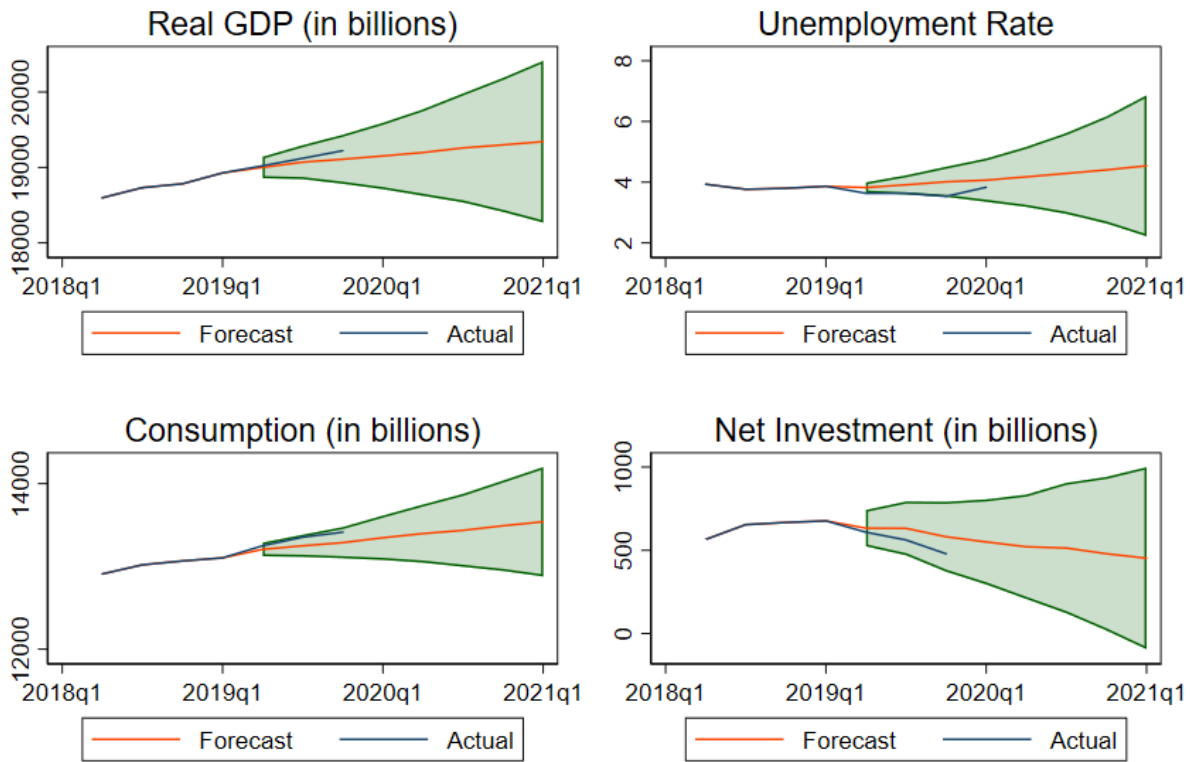
National Outlook

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. The model predicts that real GDP will grow from a value of $19.121 trillion at a relatively constant rate of approximately 0.5 percent per quarter through the end of 2020. The second indicator is Corporate Profits in billions of dollars. This indicator shows the net income of corporations in the National Income and Product Accounts (NIPA). The current $2.162 trillion in corporate profits is forecasted to remain constant. The third panel, Consumption, is the measure of the value of personal household consumption. Consumption estimates over the next three quarters look to follow a similar trajectory to the growth in real GDP over the same period; both are forecasted to increase at a constant rate. The most recently reported value for consumption was $13.413 trillion. The model projects strong growth toward $14 trillion over the forecasted period. Lastly, with similar rates to the corporate profit projections, net investment totals (the total amount of investment in capital by the business sector used to expand the capital stock) are expected to remain flat over the next few quarters.

Summary

The forecasts in this report use historical data to predict future trends. Due to time lags in the model and the availability of data when the model was run (April 2020), these forecasts do not incorporate recent changes in economic conditions brought on by the coronavirus pandemic. Therefore, the forecasts in this report and the summaries below should be seen as projections for "what might have been" without the shocks of recent events.

North Dakota

Overall, economic forecasts for the state of North Dakota show a positive outlook. Over the next few quarters, wages and gross state product are projected to increase slightly. The labor force size is expected to remain the same, and a small reduction is projected in the overall unemployment rate. Total tax collections are expected to increase slightly.

Fargo, ND-MN

Forecasts suggest the Fargo metro area will continue to strengthen and grow its economy. Wages are projected to rise; unemployment is projected to fall; and the strength of the housing market and size of the labor market are both projected to increase.

Bismarck, ND

Forecasts for the Bismarck metro area shows a consistent outlook with the potential for slight improvement. The unemployment rate, housing index, and size of the labor force are projected to remain constant; and wages are projected to increase slightly over the next few quarters. Economic conditions are expected to remain strong despite smaller growth trends than other metro areas.

Grand Forks, ND-MN

Forecasts predict growth in local economic conditions for the Grand Forks metro area. While this growth is more robust than projections for the Bismarck metro area, it remains below trends for the Fargo metro area. A moderate decrease is projected in the unemployment rate; while wages, the size of the labor force, and the strength of the housing market are all expected to increase.

Special Report

For an updated economic outlook for the state of North Dakota that incorporates rising national unemployment and falling oil prices, read the Economic Outlook Special Report: A forecast of the effect of COVID-19 on North Dakota.