

Quarterly Forecast Report

Fall 2007

Forecast Highlights

The highlights of this quarter's release include:

- The overall picture for the US economy in 2008 looks quite strong, despite current issues in the housing and credit markets.
- Inflation is the paramount concern according to the BBER forecast model. The predictions are now outside the Fed's comfort zone. .
- The forecast for the US unemployment rate is a decline next year and the year after compared to the current level.
- The state/regional results indicate some changes in the forecasts for North Dakota, Wyoming and South Dakota nonfarm personal income from the summer forecast.
- We radically altered the structure of the local area forecast model to include Bismarck and Minot in addition to Grand Forks and Fargo. The model details interesting predictions about the interaction of the city economies. The discussion focuses on the interaction of the city economies and how they may dictate competitive policy by local areas.
- The unemployment report has been expanded to be more inclusive of the state economy overall and is presented in a monthly format.

BBER would like to recognize the North Dakota Small Business Development Center (SBDC) as a partner in our efforts to provide meaningful forecasts to assist economic development efforts across the state of North Dakota.

US Forecast

Table 1. Annual forecast growth rates for key US variables

Year	GDP	INFL	BUSINV	INDPRO	UNRATE
2008	2.73	2.12	3.77	3.56	4.33
2009	2.42	1.55	1.84	1.98	4.46
2010	2.88	1.72	-2.83	1.22	4.87

Gross domestic product (GDP) BBER adjusted the macro forecast model to better account for the growing importance of the international sector in overall US economic performance. The current model (figure 1, page 3) shows improved fit with the historical data. Current concerns focus on the economy tipping into recession. While pervasive this fear has not become reality beyond a few sectors of the stock market. However, the correction currently working its way through asset markets may indicate a downward bias for the fourth quarter of 2007, which the model predicts will be 2.9%. Consensus forecasts place Q4 growth at minimal levels despite the preliminary Q3 number of 4.9%. The overall outlook for 2008 is for growth of 2.73%, but the pattern will be uneven on a quarterly basis with strong growth in Q1 and Q3 but weaker numbers in Q2 and Q4. Further adjustments will be made as the asset market turmoil ends. Early holiday retail figures were mixed with shoppers increasing but spending down.

Inflation (INFL) Figure 2 (page 3) demonstrates the BBER performance against actual inflation rates, measured by the personal consumptions expenditures price index (PCE). Inflation remains the largest roadblock to continued Fed easing. As shown in Table 1 (above) inflation is slated to be over 2% next year, above the Fed's comfort level. The forecast for the current and next two quarters is above 2.4%. When combined with robust GDP growth, strong industrial production and healthy labor markets such levels of inflation would preclude rate cuts by the Fed. The current financial market turmoil continues to be confined predominantly to the housing market and the associated financial services and has yet to manifest itself as a broader economic contraction. Absent evidence of a systemic decline in economic performance the BBER forecast indicates a Fed rate cut as unnecessary and points to the need for rate increases given current inflation expectations. Long range forecasts 2009 and beyond achieve acceptable levels of inflation with forecast increases in the Federal funds rate.

Figure 1. Actual and predicted period-over-period growth rates in US real GDP

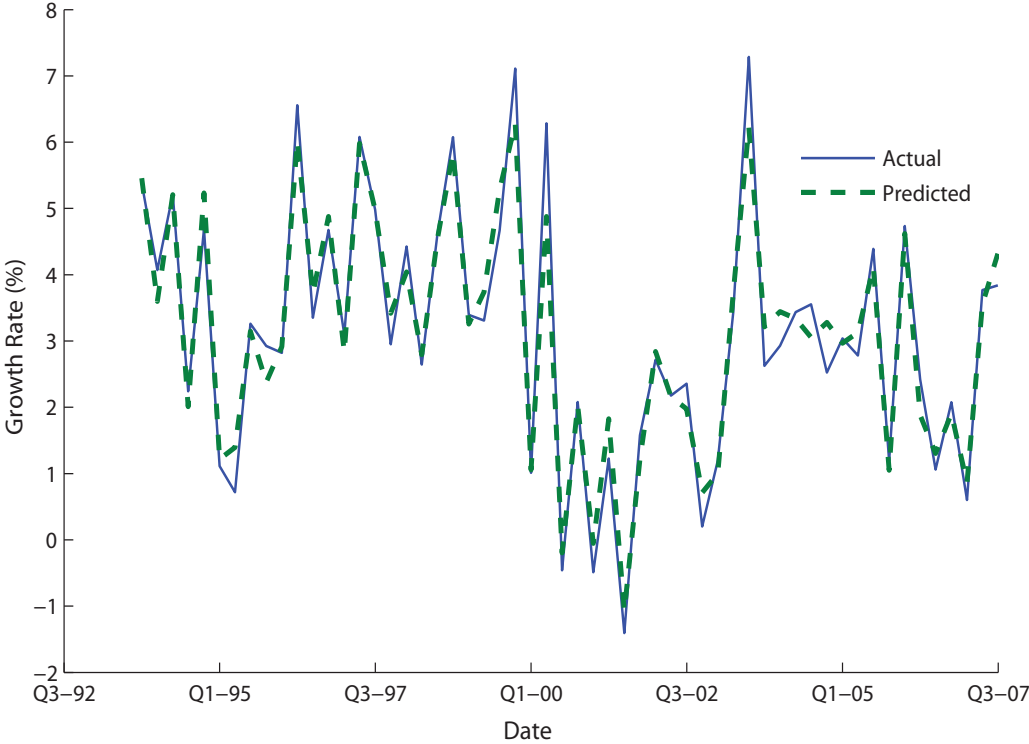
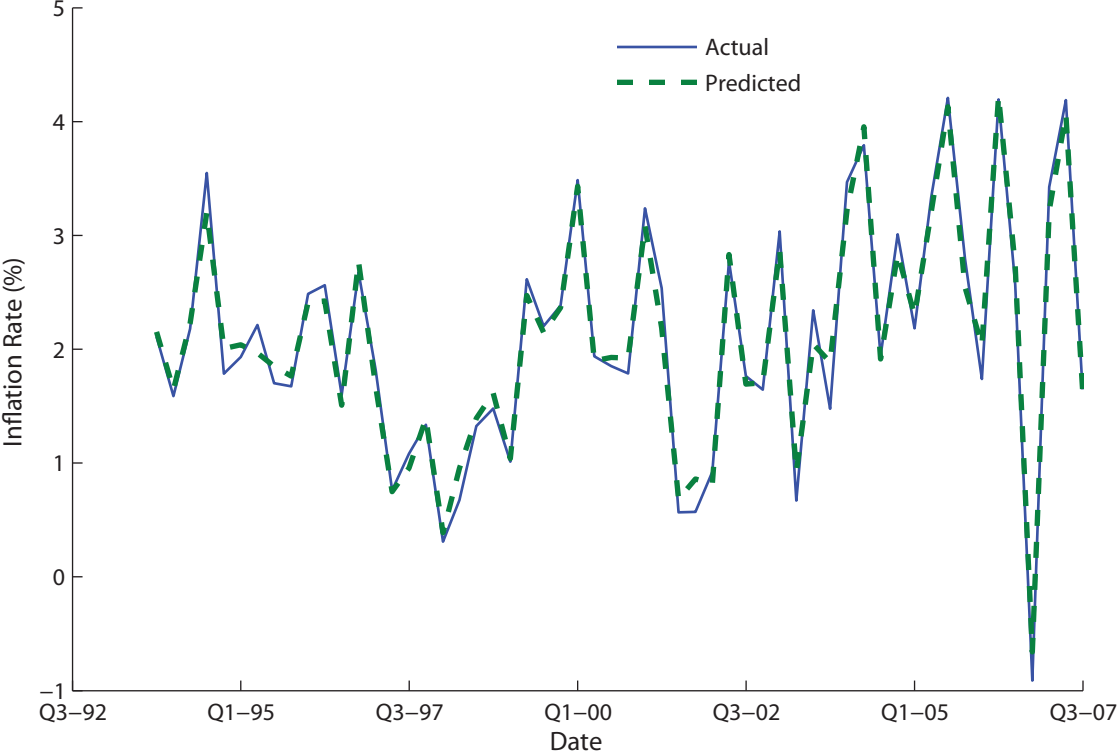


Figure 2. Actual and predicted US inflation rates



US Forecast

Unemployment Rate (UNRATE) Figure 3 (page 5) demonstrates that the BBER model continues to perform well tracking both the movements and the amplitude of the changes in US unemployment rates. The forecast for UNRATE shows the level dropping by around .4% in the next year from the current level of 4.7% and staying low for a long period of time. This is consistent with the growth predictions put forward in the model and will likely stoke inflation concerns. Low unemployment signals a tighter labor market where wage increases become more likely. Wage increases are an early warning sign of increasing inflation.

Industrial Production (INDPRO) Figure 4 (page 5) displays the model performance for INDPRO. The forecast growth rate for INDPRO in 2008 increased from 2% in the summer forecast to 3.56% in this one. It is forecast to grow at 2% in 2009 and then decline to 1.2% in 2010. Uncertainty surrounding this forecast comes from energy and commodity prices. These are necessary inputs in production processes that could result in reduced output should shocks occur. The US foreign exchange situation may prove to be a boon as a cheap dollar will make US exports to other countries more competitive with foreign made products, both at home and abroad. For those worried about recession it is worth reiterating that since 1950 the US has not entered a recession unless INDPRO fell. Given the positive outlook for INDPRO, as well as GDP and other variables, the probability of the economy tipping into recession is not high.

Policy Concerns & Forecast Bias A significant level of uncertainty exists about the proper course for Federal Reserve policy. Asset markets are a mess with large swings in both directions, though the balance over the last few weeks has been negative overall. Despite poor performance from certain sectors of the financial market there is still a conflicting message from broader economic indicators. Income growth remains strong while foreign exchange, housing and related sectors display persistent weaknesses. Only this week do we get some sign of weakness in the labor market, which may provide the Fed some cover to reduce rates without stoking inflation. Any sustained decline in jobless claims raises the specter of tight labor markets and will raise difficult questions about the level of both inflation and inflation expectations in the second half of 2008. Consumer confidence continues to decline without registering reductions in consumer spending. Overall the Fed is dealing with a muddled picture of where the economy stands. One key to note is that we have yet to see the impact of the most recent rate cuts on macroeconomic numbers, that will not happen until the second half of 2008. These rate cuts resulted in a positive impetus in financial markets, but the movement was not sustained positive. The BBER model indicates further rate cuts would increase GDP growth but also increase the inflation rate. Given the current predictions, combined with the Fed's bias of equal risks to increased inflation and lower growth and the Beige book report that there is no decline in business lending as yet, it seems ill-advised to be talking about further rate cuts at this point in time.

Figure 3. Actual and predicted US unemployment rates

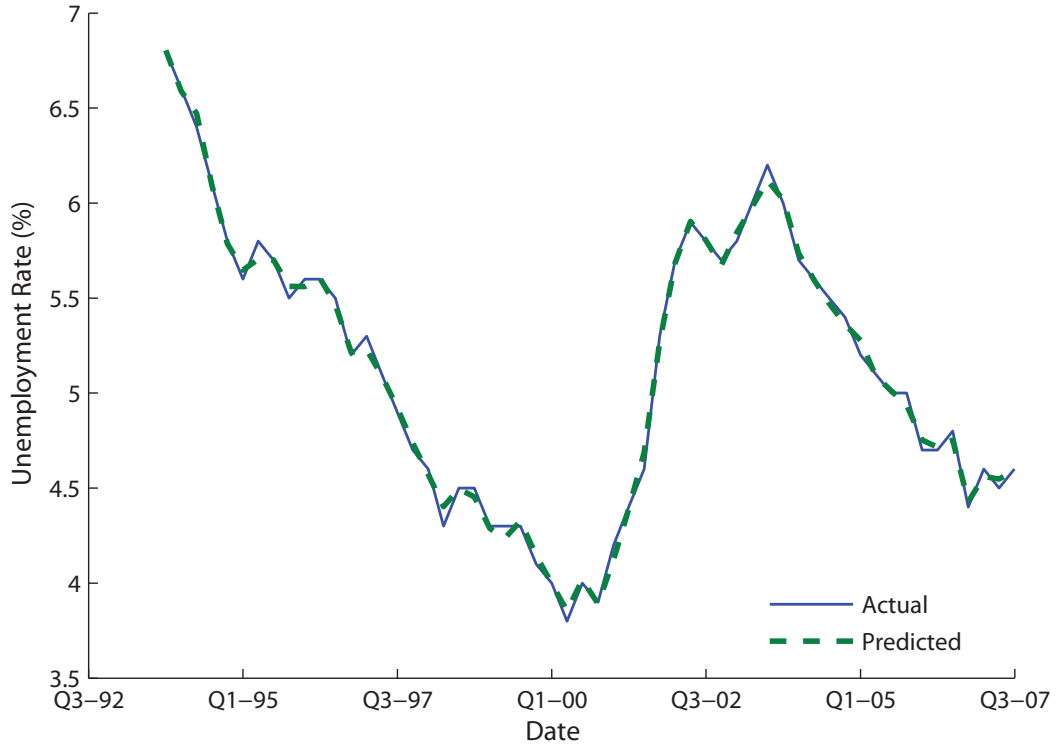
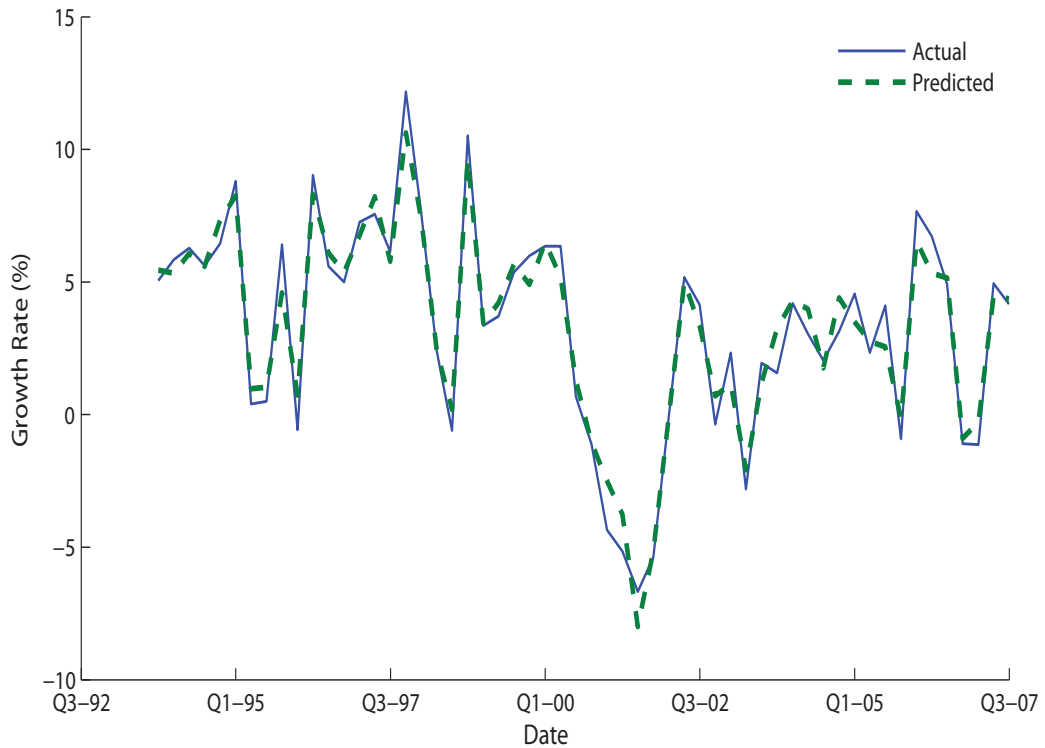


Figure 4. Actual and predicted industrial production growth.



State/Regional Forecast

Table 2. Annual forecast growth rates for NFPI in region

Year	MN	MT	ND	SD	WY	US
2008	1.18	1.70	1.11	1.00	1.47	1.39
2009	1.68	1.46	1.11	1.56	1.66	1.16

Regional Outlook Table 2 provides the forecast growth in real per capita nonfarm personal income for states in the region. Montana continues to be a leader in income growth while South Dakota will lag the pack in 2008 and rebound strong in 2009. The forecast for Wyoming is also quite strong. North Dakota remains in the back of the pack overall with growth in per capita income less than stellar compared to other states in the region. Growth strategies for North Dakota continue to be:

- Competition: whenever possible exploit advantages against states exhibiting growth.
- Supply Chain: Supply growth sectors in states like Wyoming or Montana with crucial inputs or use these states as suppliers for new industries in North Dakota.

For the various states we provide a discussion of the relationship between income growth between the various states, showing that some states grow at the expense of others while some create growth. North Dakota policy makers need to continue to find new ways to exploit these opportunities and reduce the threats implied in these results differences.

ND Nonfarm Personal Income (NFPI) Figure 5 (page 7) illustrates the continued strong performance of the BBER model. The current quarter forecast results for North Dakota NFPI increased by 0.03% over prior estimates. North Dakota growth remains lower than other states and remains the lowest growth level in the region. Two important factors that continue to promise to push growth higher are the sustained economic expansion in western North Dakota incomes due to oil prices and the increased pace of investment in alternative energy production. Neither of these factors are fully integrated into the data and the forecasts yet. Alternative energy poses some risks as ethanol production comes under concerted attack from groups such as ranchers and those arguing for “affordable” food prices. The recent reductions in ethanol prices will likely shake out some producers as well. Also the exact form of the farm support bill is not yet determined. While this series is for nonfarm income, the impact of farm income cannot be understated. On balance the potential exists for further and larger upward revisions in income forecasts. BBER model results indicate that higher growth in Montana and South Dakota reduce growth in ND while improved income growth in Wyoming creates future growth in ND NFPI.

Figure 5. Actual and predicted growth rates for ND nonfarm personal income

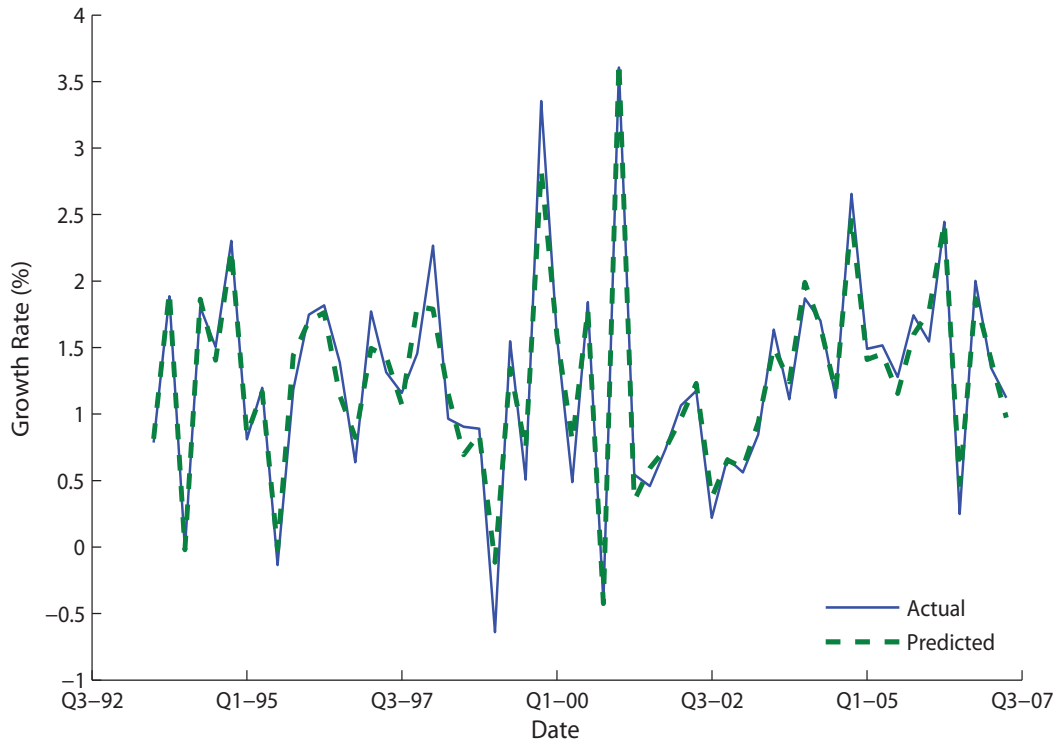
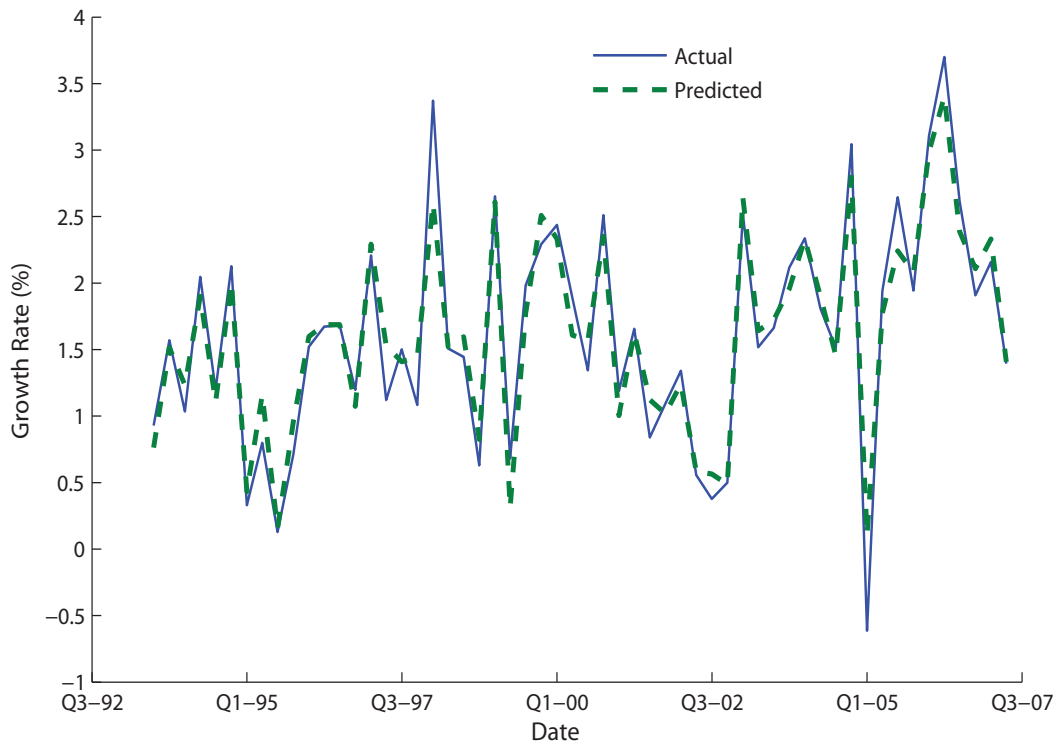


Figure 6. Actual and predicted growth rates for WY nonfarm personal income



Regional Income Forecast

Wyoming Table 2 shows Wyoming is forecast to be one of the regional growth leaders in NFPI over the next two years. Figure 6 (page 7) shows that the BBER model does quite well predicting the fluctuations in income growth in Wyoming. It is unclear whether the rapid growth will be sustainable beyond the current forecast horizon, though current legislative actions and energy market concerns make this a possibility. The model indicates that Minnesota, Montana and South Dakota represent risks to Wyoming income growth as there is a negative relationship between NFPI in these states and Wyoming.

South Dakota South Dakota is forecast to be a slower growth state next year with a significant improvement in 2009. Figure 7 (page 9) shows the BBER model predicting quite well the recent turns in the data and the level of growth for South Dakota. The model indicates a negative relationship between NFPI growth for South Dakota and Montana and North Dakota while Wyoming income growth is positively related to future South Dakota income growth.

Montana The Montana model enhancement led to significantly improved fit with the historical data shown in Figure 8 (page 9). The forecast places Montana as the leader in 2008 with strong growth continuing in 2009, though the relative status of Montana deteriorates. As with North Dakota, questions persist about the extent to which strong growth in key sectors impacted the data already, and whether such a pattern will persist. As with the other states there are some predictions about the competitive situation between the various states in the region. Minnesota growth exerts a strong negative impact on future Montana growth while North Dakota is more of a neutral to slightly negative influence on future Montana growth. Wyoming income growth has a positive impact on future Montana growth rates.

Minnesota Table 2 indicates nearly 1.2% income growth in Minnesota next year with a 33% improvement in 2009 to 1.68%, vaulting Minnesota from middle of the pack to leader status in the regional economy. Current legislative issues regarding tax policy and other economic issues are not causing any serious issues for growth of NFPI. Certain regions of the state, such as the Northwest should be paying close attention to the final content of the farm bill as sugar may be a big winner if the latest version goes through. As in North Dakota and other states in the region alternative energy programs are paying off for agriculture. The model results indicate that greater growth in Montana and South Dakota reduce Minnesota NFPI growth while North Dakota and Wyoming NFPI growth are positively related to Minnesota NFPI growth.

Figure 7. Actual and predicted growth rates for SD nonfarm personal income

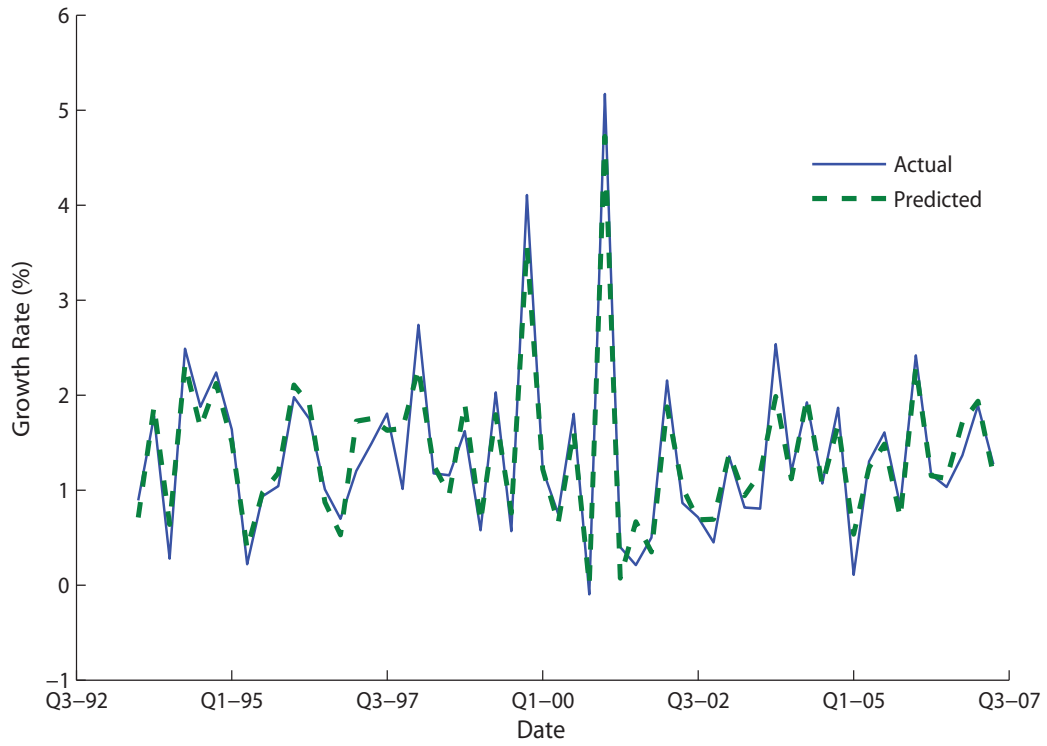
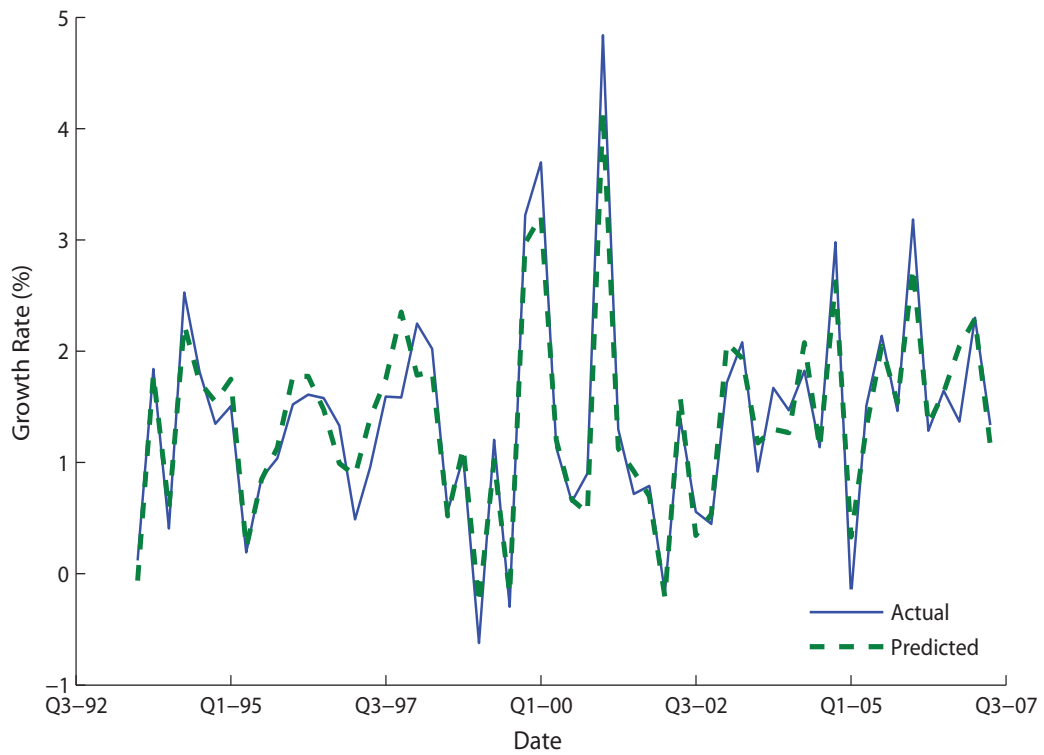


Figure 8. Actual and predicted growth rates for MT nonfarm personal income



Local Area Forecast - Income

Table 3. Growth rate in real per capita nonfarm personal income growth by metropolitan area*

Year	Bismarck	Fargo	Grand Forks	Minot
2007	2.72	0.76	2.12	4.78
2008	1.51	3.33	-1.16	2.17
2009	1.24	-0.54	1.13	3.75

***Data Note** Data for local area nonfarm personal income ends in 2005 and therefore requires the forecast of values for 2006. We exclude the forecast of 2006 but caution against too much being made of the 2009 forecast given the extended time horizon.

As mentioned before, the discussion for this quarter focuses not on the forecast outcomes which are included above in Table 3, but on the implied relationship between these four ND cities. More precisely, the focus is on whether the different cities increase or decrease the income growth in other cities. There are many anecdotal accounts of how growth in one part of the state helps, or hurts, growth in another part of the state, the discussion here aims to add statistical rigor to the debate.

Bismarck Past growth in Fargo is negatively related to current Bismarck income growth while both Grand Forks and Minot exhibit positive relationships. The Grand Forks impact is quite small, not surprising given the distance between the two cities. The Fargo relationship confirms what most anecdotal accounts indicate: Fargo is a drain on Bismarck.

Fargo Fargo growth is positively related to both Bismarck and Grand Forks growth and the model indicates neither a positive nor a negative relationship with Minot growth. The again confirms conventional wisdom: good economic news for Bismarck and Grand Forks leads to good news for Fargo as well. An important implication from this has to do with cities like Jamestown, right between two larger metropolitan areas. Jamestown SBDC and regional council members have indicated in the past that part of the problem with growing their town is the loss of retail traffic in both directions. If, as appears likely, Bismarck shoppers go to Fargo, how much of a chance do Jamestown stores have to stem such an outflow?

Grand Forks As was the case with Bismarck, growth in Grand Forks growth is negatively related to growth in Fargo. Bismarck does not exhibit any relationship at all with Grand Forks and Minot growth has a positive relationship with growth in Grand Forks. The most interesting outcome is the growth in Minot leading to growth in Grand Forks, which, given current predictions for Minot growth indicate a potential rosy future for Grand Forks growth.

Minot Minot growth is negatively related to Bismarck growth and is surprisingly positively related to Fargo growth. There is not relationship to speak of between growth in Grand Forks and growth in Minot though, as was mentioned above, the reverse is true. Given the distance between them the correlation with Fargo is surprising. The correlation with Bismarck once again confirms the conventional wisdom.

Figure 9. Actual and predicted growth rates for Fargo nonfarm personal income

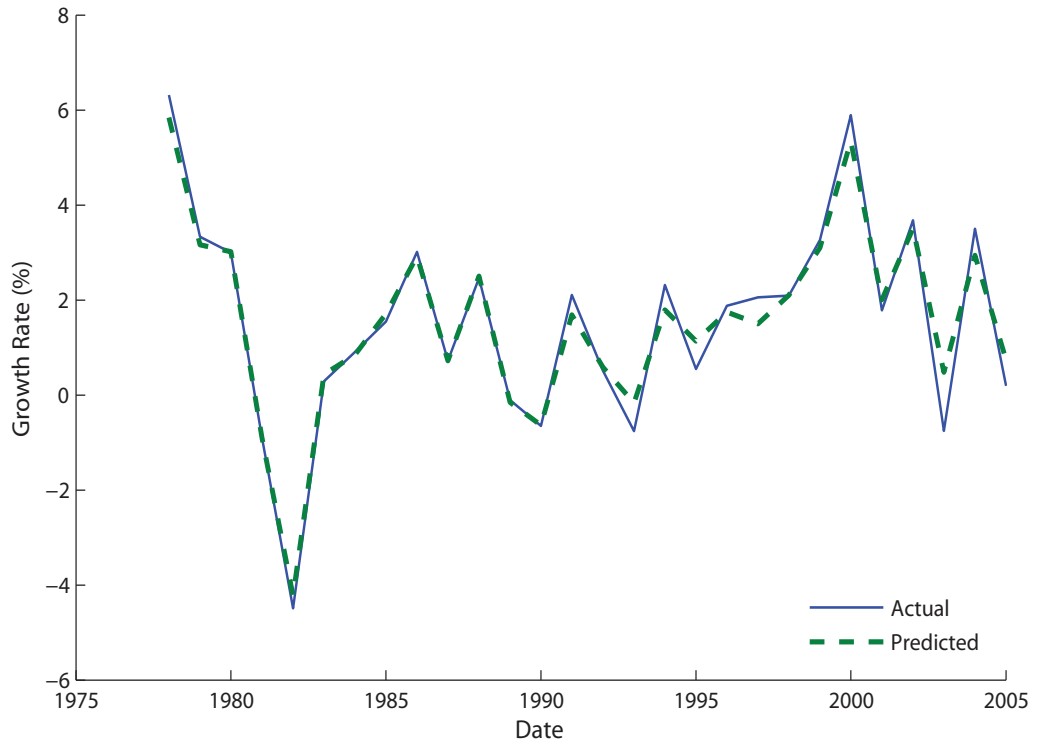


Figure 10. Actual and predicted growth rates for Grand Forks nonfarm personal income

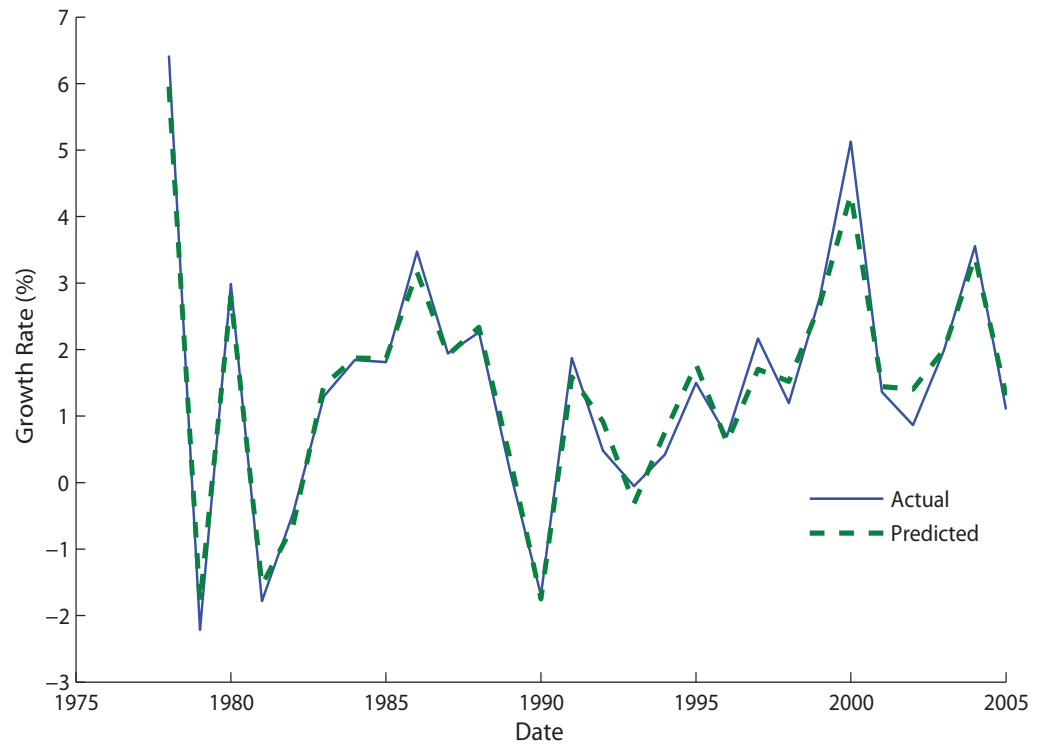


Figure 11. Actual and predicted growth rate for Minot nonfarm personal income

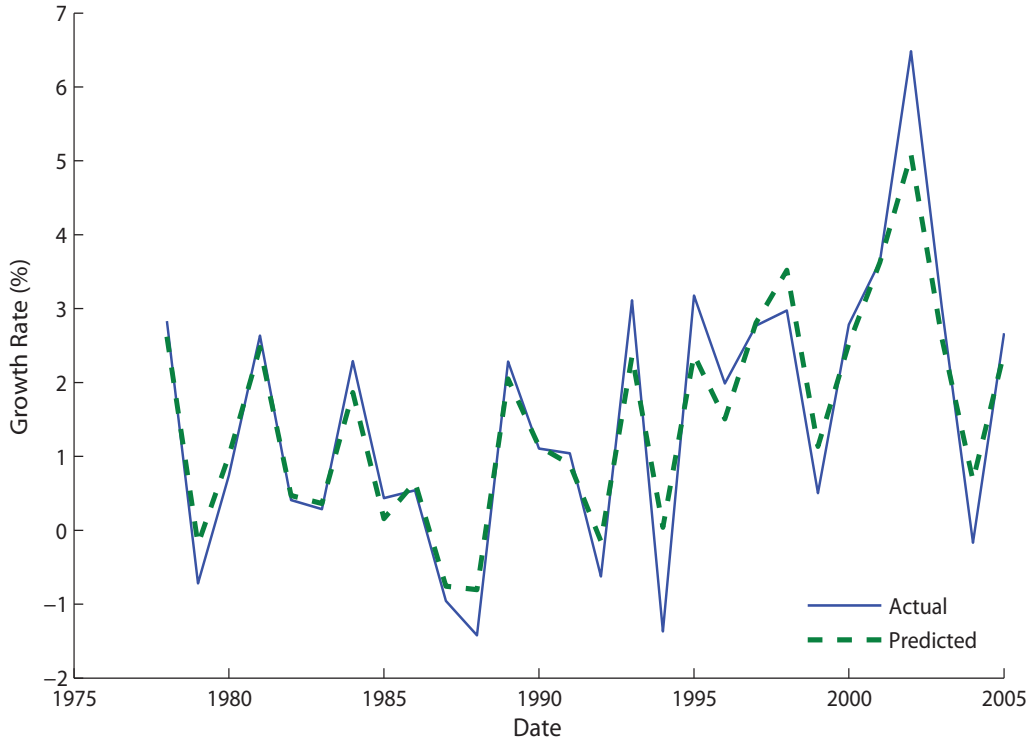
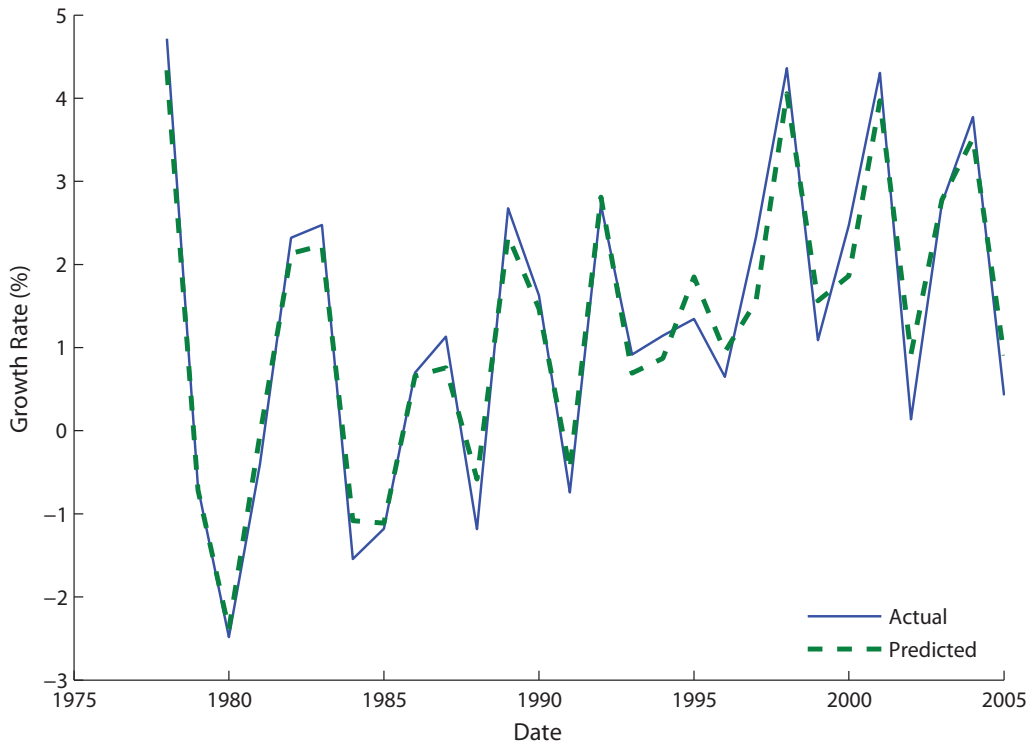


Figure 12. Actual and predicted growth rate for Bismarck nonfarm personal income.



Local Area Forecast - Unemployment

Table 5. Unemployment rate by metropolitan area

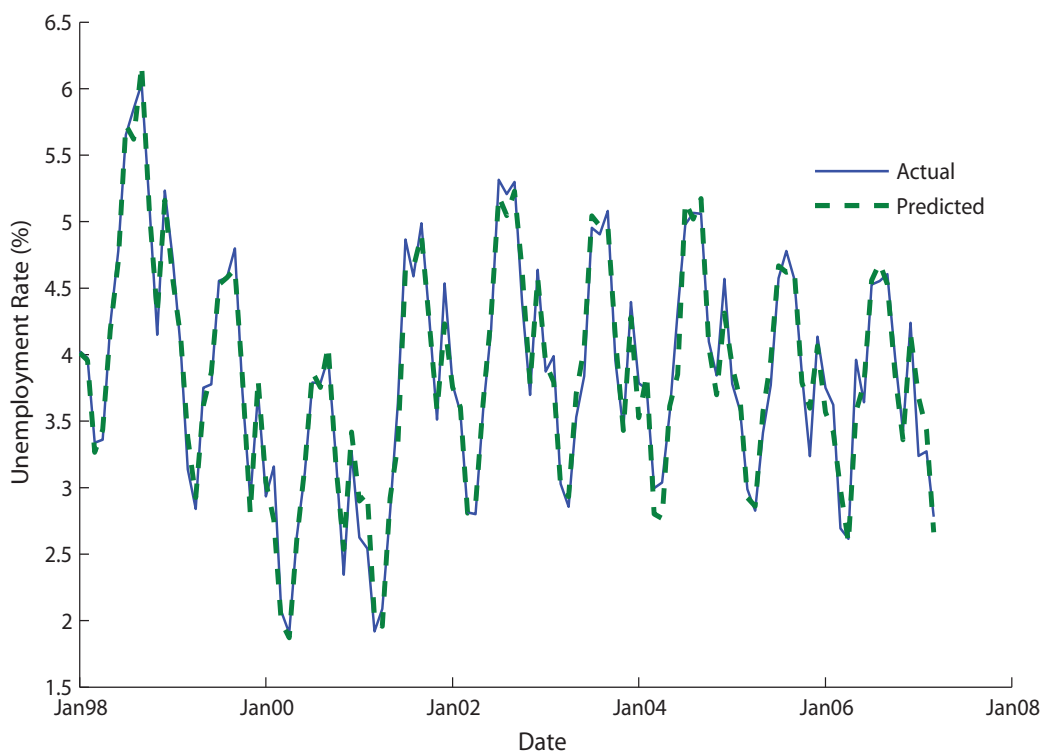
Year	Bismarck	Fargo	Grand Forks	Rest of ND
Oct 2007	2.2	2.1	2.3	2.4
Nov 2007	2.7	2.7	3.0	3.8
Dec 2007	2.9	2.9	3.4	3.7
Jan 2008	3.7	3.4	4.3	4.4
Feb 2008	3.4	3.3	4.2	4.4
Mar 2008	3.3	3.3	4.3	4.4
Apr 2008	3.1	3.1	4.1	3.9
May 2008	2.4	2.6	3.5	3.3
Jun 2008	3.1	3.2	4.3	4.1
Jul 2008	2.3	2.4	3.6	3.3
Aug 2008	2.4	2.5	3.4	3.3
Sep 2008	2.2	2.4	3.0	2.9
Oct 2008	2.2	2.1	2.5	2.6
Nov 2008	2.9	2.6	3.2	3.8
Dec 2008	3.0	2.8	3.4	3.8

The unemployment model underwent a major revision since the summer forecast report. The model continues to report Fargo and Grand Forks, but now includes two new locations, Bismarck and the Rest of ND. Rest of ND is exactly what the name says, this is the unemployment rate in North Dakota, outside of the three listed metropolitan areas. Unemployment in North Dakota as a whole remains well below the current national level of 4.7%. The forecast level for the US in 2008 is 4.3%. When compared to the forecasts for the four areas in ND we see the unemployment rate in North Dakota is forecast to remain quite low in comparison to national levels. Figure 12 (page 14) displays the actual unemployment rates over the last ten years and the predicted rates based on the BBER model for “Rest of ND”. Clearly the model performs quite well (charts for other areas are available upon request).

Recent employment concerns statewide have moved beyond the unemployment rate to consider underemployment, the number of people working multiple jobs, by choice or by necessity. It remains true that unemployment rates can mask potential problems in an economy plagued by significant underemployment, so BBER applauds efforts to generate meaningful data series related to this issue. Accurate figures on the underemployed would help reduce the problems created by low unemployment figures.

Low unemployment present difficulties to policy makers and economic developers as they attempt to attract firms to a state or region within a state. The perception is that an insufficient pool of workers exists. To induce workers to move to an area or leave jobs wages would need to be raised. This tends to make regions appear less competitive that they truly are, reducing the likelihood of attracting new firms to the area.

Figure 12. Actual and predicted unemployment rate for rest of ND



Data Sources

The data employed in the forecasting model are publicly available from a variety of sources. The most comprehensive resource for the macroeconomic variables is the FRED database at the St. Louis Federal Reserve Bank web site (www.stlouisfed.org). Much of the data are available also from the Bureau of Economic Analysis (www.bea.gov) the Bureau of Labor Statistics (www.bls.gov), both of which are an excellent resource for state and local data. If you have suggestions regarding data sources please send them to us.

Next Forecast Release

BBER updates its forecast models as data become available. Please contact us with questions about revisions. The next scheduled *Quarterly Forecast Report* will be in February.



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