

# 2019 Forecast

*for the United States, Midwest, and East Central Indiana*

To provide context for our annual economic forecast, we review last year's projections and offer analysis of recent tax cuts, import tariffs, and monetary climate.

We then provide an updated economic forecast for 2019-2022 and analyze performance at the state and local levels.

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## Overview

Projecting economic activity through 2019 is challenged by competing economic factors that both slow and accelerate growth. On the positive side, labor markets have performed well throughout most of the past several years, and wage growth has recently increased to roughly 1.0 full percentage point above inflation. **Stronger labor markets, higher pay, and higher levels of labor force participation combine to boost consumption of goods and services.** The Tax Cuts and Jobs Act reduced the marginal tax rate on most households and businesses, thus generating likely increases in consumption and investment. These factors suggest continued growth at an accelerated rate through 2019.

Risks to faster growth include the Federal Reserve's monetary tightening schedule, which is expected to return a rate increase in December 2018. Further tightening is anticipated through 2019. This is a large and predictable growth risk for the US economy in 2019. Given the Federal Reserve's dual mandate to sustain employment and contain inflation, **the combination of strong labor markets and growing signs of inflation argue for continued tightening.**

The second great risk to growth in 2019 is a slowing world economy. **The most recent International Monetary Fund forecasts predict world growth slowing to 3.9 percent in 2019 and advanced nations slowing to 2.2 percent.** The US is outperforming most of the developed world, and that is anticipated to continue in 2019 with growth of 2.5 percent. Slowing demand for goods worldwide would risk a downturn for all trading nations.

Growing trade disputes have generated the most significant non-conflict risk to international trade since 1930. Current tariff rates and retaliation by trading partners is already damaging the domestic economy. **At current levels, the trade dispute is not sufficient to generate a business cycle, but may be large enough to offset the entirety of the Tax Cuts and Jobs Act.** Moreover, the effects of a trade war will be felt disproportionately across the country. The Midwest in particular, including **Indiana, Ohio, and Wisconsin are among the most trade-exposed states in the union.**

To provide context for our 2019 forecast, we review last year's projections and offer analysis for the aforementioned economic issues. We then provide an **updated forecast for 2019-2022** and analyze state and local economic performance.

# Past Performance and Projections

## GDP Growth

Our previous forecasts highlight the steady but slow economic growth that characterizes this business cycle. For 2017 and 2018, we projected annual GDP growth in the 2.2-2.5 percent range (Hicks, 2017). Our 2017 projections were close, but actual economic performance thus far through 2018 Q2 has been much stronger than anticipated. See [Table 1](#).

As we outline later in this report, a portion of this performance is attributable to the consumption and investment effects of the Tax Cuts and Jobs Act.

The experience of quarterly GDP growth in 2018 is stronger but not unusual by historical standards. [Figure 1](#) depicts inflation-adjusted (real) GDP growth rates for the United States, 2013 Q1-2018 Q2.

## Productivity and Employment

The current expansion has been characterized by slow productivity growth, particularly in the manufacturing sector. Slow productivity growth may be the result of lumpy investment or idiosyncratic technology shocks. This slow productivity growth has been of extraordinary academic interest in recent years, and no single consensus as to its cause has emerged. What we do know is that during periods of increasing demand, firms either hire more workers or experience productivity growth.

[Figure 2](#) depicts almost three decades of this relationship, which shows the very high rates of firm productivity growth accompanying periods of factory job loss. This graphic paints a clear picture of productivity, rather than import substitution, as a factor in manufacturing employment loss over the past three decades.

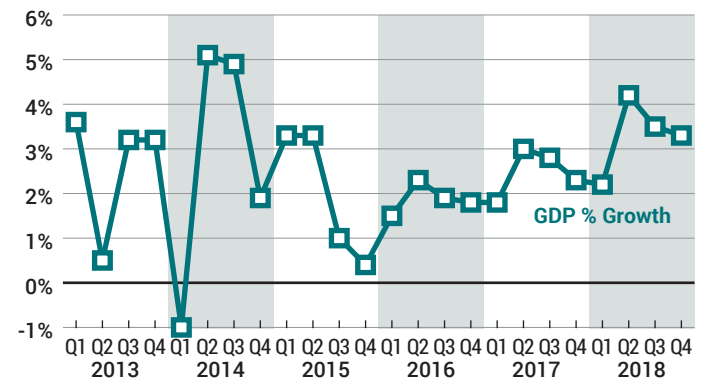
Data trends suggest that high productivity among manufacturing firms is a strong contributor to the 30-year decline of employment in the manufacturing industry.

**Table 1. GDP Growth in US and Midwestern States, 2017-2022**  
Source: Author's calculations

GDP	2017		2018		2019	2020	2021	2022
	Forecast	Actual Q1-Q4	Forecast	Actual Q1-Q2	Forecast	Forecast	Forecast	Forecast
US	2.5%	2.2%	2.2%	3.2%	1.8%	1.8%	2.0%	2.1%
IL	0.6%	0.4%	0.8%	3.6%	1.0%	0.6%	0.4%	0.1%
IN	2.3%	1.8%	2.1%	3.6%	1.8%	1.8%	1.9%	2.0%
MI	2.0%	2.2%	1.6%	5.4%	1.1%	1.1%	1.4%	1.6%
OH	1.6%	1.6%	2.0%	3.2%	1.0%	2.0%	1.8%	2.5%
WI	2.1%	1.3%	1.9%	2.8%	1.7%	1.7%	1.8%	1.9%

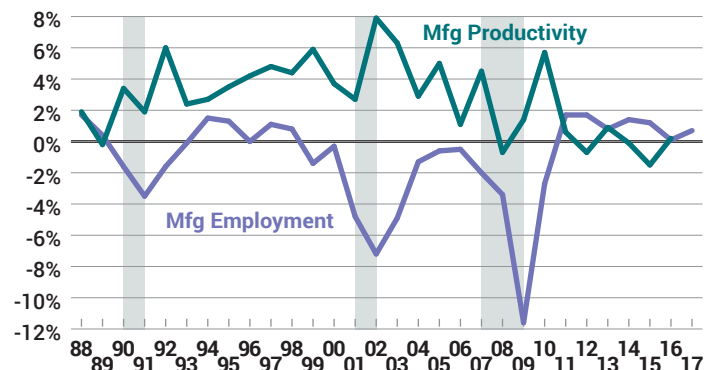
**Figure 1. Quarterly US GDP Growth, 2013 Q1-2018 Q2**

Source: Federal Reserve Economic Data (FRED)  
Note: We use quarterly data at an annual rate



**Figure 2. US Manufacturing Employment and Productivity Growth, 1988-2016 (Percent Change)**

Source: Federal Reserve Economic Data (FRED)  
Note: Recession years are marked in gray



# Issues in a Turning Economy

The economic expansion that began in July 2009 is now the second longest on record. If the economy continues to expand into summer 2019, this will be the longest period of growth since the 1840s. The duration of a recovery is uncorrelated with higher probability of recession, but recoveries end. Moreover, recoveries always end when times are good, and forecasting models do poorly in capturing economic turning points. So, to think a bit more fully about turning points, we'll use a familiar framework to discuss some key indicators of a turning economy—highly volatile elements of consumption and investment.

## Measures of Consumption

### HOUSING

Across the major metropolitan areas of the United States, housing prices have returned to levels seen on the cusp of the Great Recession. This is important because housing is a major contributor to household wealth, and this value growth provides a store of value for consumers. Unfortunately, new housing starts remain at levels far beneath the late 1990s and the 2004-2007 period. See *Figure 3*.

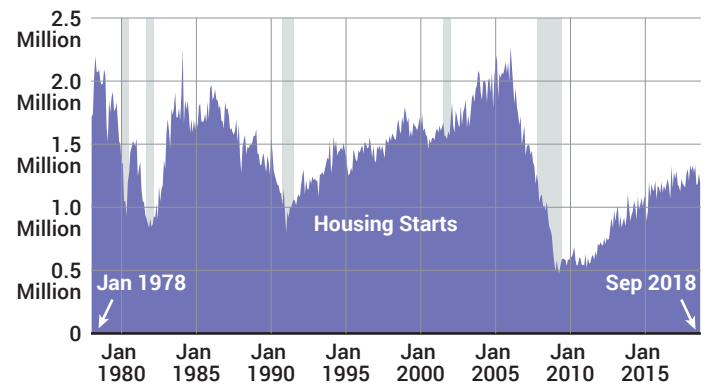
New housing starts, which peaked most recently in early 2018, have been declining through 2018. This can be attributed to higher mortgage interest rates. To isolate the effect, we estimate the effect of a 0.25-point increase in the mortgage interest rate on new housing starts, holding all other factors constant.<sup>1</sup> Housing over the past year has averaged 1.26 million new starts per month. See *Figure 4*. A 0.25-point (25 basis point) increase in the 30-year fixed-rate mortgage is expected to reduce monthly new housing starts by roughly 36,000 homes, or roughly 2.8 percent, over the year.

Overall, we expect new housing starts nationally to moderate slightly through the end of 2018 and into 2019 and 2020, regardless of additional action to tighten monetary policy by the Federal Reserve. See *Figure 5*.

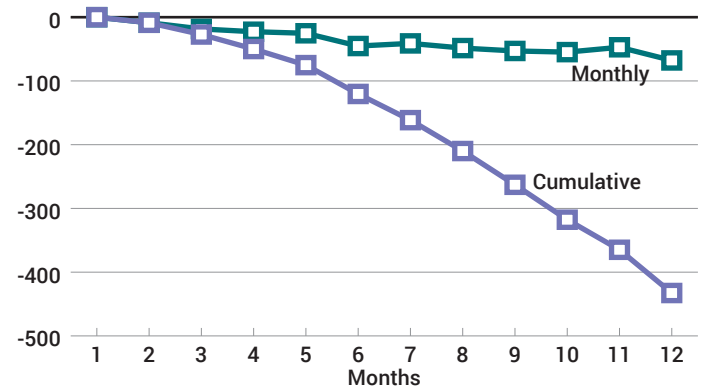
We do expect the Federal Reserve to continue its monetary tightening regime, increasing rates by 25 basis points at least once in 2018 and once in 2019, which is a conservative estimate. Over the past 12 months, the US has averaged 1.243 million new homes built per month. Our forecast baseline has monthly starts dropping to 1.156 million in 2019 and 1.102 million in 2020. With two rate changes, we expect slower new home construction, averaging 1.114 million per month in 2019 and only 1.108 million in 2020.

1. This is formally the impulse response function to a vector autoregression with monthly data and 34 lags. Endogenous variables include new housing starts, 30-year fixed mortgage interest rates, University of Michigan's Consumer Sentiment Survey, the Case-Schiller 10 City Home Price Index and the NBER recession probability series.

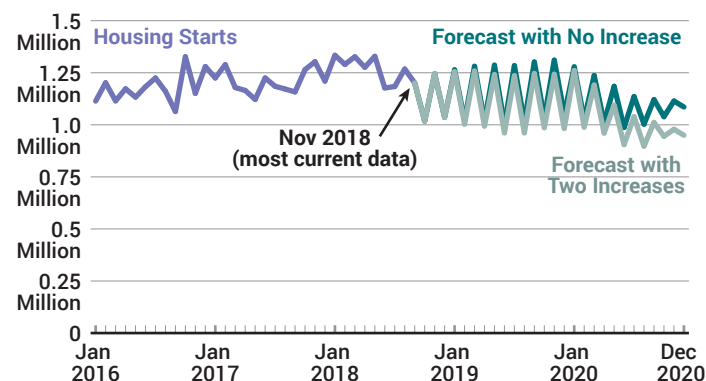
**Figure 3. New Housing Starts, 1978-2018**  
Source: Federal Reserve Economic Data (FRED)  
Note: Recession years are marked in gray



**Figure 4. Effect of a 0.25% Increase (25 Basis Points) in 30-Year Mortgage Rates on New Housing Starts**  
Source: Federal Reserve Economic Data (FRED)



**Figure 5. Housing Starts Forecast (New Home Construction)**  
Source: Federal Reserve Economic Data (FRED)



**Table 2. The Estimated Cost of New Tariffs**

Source: Varas, J. 2018. American Action Forum

	List 1	2018		List 2	2019	
Tariff	Value of Affected Imports (Billions)	Tariff Rate	Additional Cost Burden (Billions)	Value of Affected Imports (Billions)	Tariff Rate	Additional Cost Burden (Billions)
Sect. 232, Steel	\$23.40	25%	\$5.80	\$23.40	50%	\$11.70
Sect. 232, Aluminum	\$16.60	10%	\$1.70	\$8.30	25%	\$8.10
Sect. 301, Pt. 1	\$32.30	25%	\$8.10	\$16.15	25%	\$3.40
Sect. 301, Pt. 2	\$13.70	25%	\$3.40	\$6.85	25%	\$39.30
Sect. 301, Pt. 3	\$159.30	25%	\$39.30	\$79.65	25%	\$39.30
<i>Total</i>	<i>\$245.30</i>	<i>...</i>	<i>\$58.80</i>	<i>\$134.35</i>	<i>...</i>	<i>\$101.80</i>

## TARIFFS

Beginning in January 2018, the Trump Administration imposed graduated tariffs on solar panels and washing machines. These escalated with additional announcements of tariffs on steel (25%) and aluminum imports (10%). After a short delay, these tariffs were implemented with scheduled increases in January 2019. The administration also extended tariffs to more products in 2019 in two successive waves. All this is authorized under sections of the Trade Act of 1974, which allows the president broad powers to claim national security or unfair trading practices, and impose tariffs. See [Table 2](#).

Estimates of the tariff burdens on imports are roughly \$58.8 billion in 2018, rising to \$101.8 billion following the second round of increases in January 2019 ([Table 2 List 2](#)).

Tariffs are taxes imposed on imports. Administratively, these taxes are paid by importing firms, but the incidence falls upon the consumer and producer through a combination of price increases and lessened demand for goods. Recent research on tariff incidence suggests it is borne most heavily by domestic consumers.<sup>2</sup>

## TAX CUTS AND JOBS ACT

The Tax Cuts and Jobs Act (TCJA) has enjoyed almost a year of estimated effects. Some of these studies are compared below. Note that all but one of these studies estimate GDP growth impacts of between 0.3 percent and 0.9 percent in the first three years following the passage of the legislation. The intermediate term effects from 2020-2025 are roughly in the same range, while effects over the longer term range from near zero as the legislation expires to somewhat higher assuming reauthorization.

The economic goal of the legislation was to simplify taxes, boost household consumption, and increase business investment. The

2. See Moran, T. 2014 and Furman, J., K. Russ and J. Shambaugh, 2017.

**Table 3. Summary of TCJA Estimated Effects on GDP**

Source: Adapted from Gale (2018)

Studies include Barro and Furman (2018); Congressional Budget Office (2018b); Hicks (2017) Indiana only; International Monetary Fund (2018); Zandi (2017); University of Pennsylvania (2017); Page et al. (2017)

	GDP Effect (Percent Change)		
	2018-2020	2020-2025	2025 and later
Barro and Furman	...	...	0.2-1.0%
Congressional Budget Office	0.6%	0.7%	0.6%
Hicks	0.4%	0.7%	0.0%
International Monetary Fund	0.8%	0.6%	...
Moody's	0.4%	0.3%	0.4%
Penn-Wharton Budget Model	...	0.6%	...
Tax Policy Center	0.7%	0.5%	0.0%

**Table 4. Net Effects of TCJA and Tariffs (Trade War)**

Source: TCJA estimates taken from Table 3; tariff estimates from York and Pomerleau, 2018

	TCJA	Tariffs	Net Effect
GDP	0.4% to 0.7%	-0.59%	-0.19 to 0.11
GDP (Billions)	\$100.56 to \$175.99	-\$148.33	-\$48 to \$28
Employment	310,000 to 542,000	-459,000	-149,000 to 83,000

legislation also increased the budget deficit, which will influence trade data in the next section.

It is clear from the GDP data that consumption grew in at least the two middle quarters of 2018. There is no evidence of increased business investment, indeed there was a slowing of total business investment in the first three quarters of 2018. Real gross private domestic investment was actually slower in 2018 than the whole of the post-recession period.

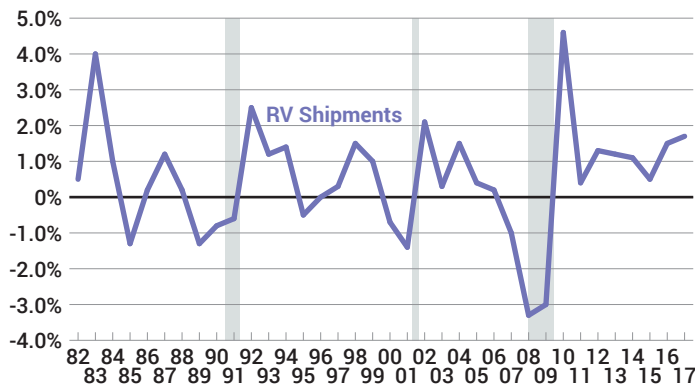
There is an abundant history of the effects of taxes on investment and consumption, and there is little dispute over the size of these effects. The lessened impact of the TCJA is likely due to secondary causes. These include monetary tightening and a growing trade war.

## THE NET EFFECT OF TCJA AND TARIFFS

The range of effects outlined in [Table 2](#) and [Table 3](#) offer a ready method for netting out the effect of both policies. We can do so for GDP growth rates, total GDP and total employment. This quick analysis makes clear that current effects of the trade war roughly offset the benefits of the Tax Cuts and Jobs Act. See [Table 4](#).

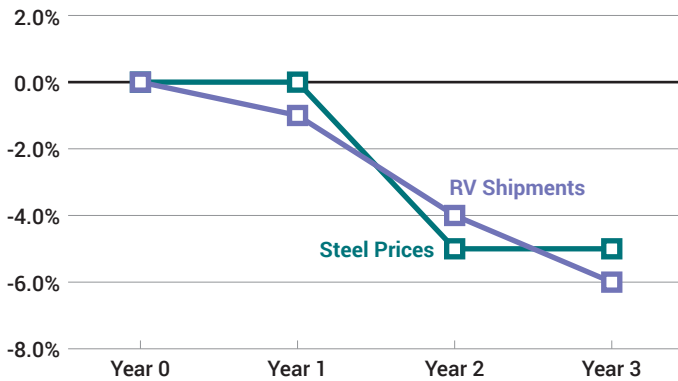
**Figure 6. RV Shipments and Recessions, 1982-2017**

Source: Recreational Vehicle Industry Association (RVIA)  
 Note: RV shipments are measured as wholesale sales to retail  
 Recession years are marked in gray



**Figure 7. Effect of a 1.0 Percent Change in Auto Loan Rates on Steel Prices and RV Shipments**

Source: Federal Reserve Economic Data (FRED)



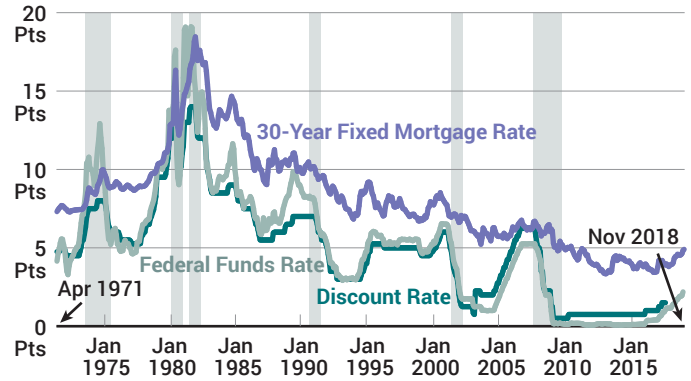
## CONSUMER DURABLES (RVs)

Among the most sensitive sectors are income-elastic consumer durables, better known as luxury goods. Recreational vehicles are an important and visible luxury item, which are produced primarily in Indiana. *Figure 6* illustrates the annual change in RV shipments (wholesale to retail locations) from 1982 through 2017. As should be clear, RV sales closely match the business cycle. Every shipment decline of two years or longer accompanied a recession, and there were only two non-recession declines in the 35 year history of these data. Over the first three quarters of 2018, recreational vehicle shipments have declined 29 percent over the previous 12 months.

Investigating this decline requires analysis of data. To conduct this analysis, we collect average price, input cost indices, consumer sentiment, measures of borrowing costs (60-month automobile loan rates), industry trend, history, and volatility measures as factors explaining the number of RV shipments. From that estimate, we estimate the marginal effect of a 1.0 percent change in interest rates on steel prices and RV shipments. See *Figure 7*. This analysis suggests a very similar effect of both on RV shipments;

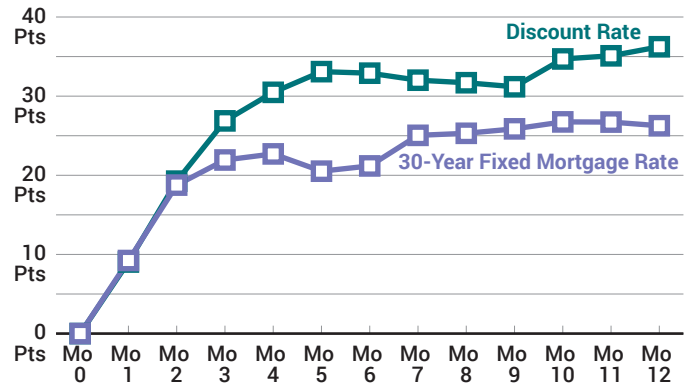
**Figure 8. Historical Interest Rates**

Source: Federal Reserve Economic Data (FRED)  
 Note: Recession years are marked in gray



**Figure 9. Cumulative Impulse Response of a 25 Basis Point Increase in the Targeted Federal Funds Rate**

Source: Federal Reserve Economic Data (FRED)



although, the difference between a 1.0 percent change in interest rates and steel prices are significantly different magnitudes. This reinforces the potential for significant effects because both steel prices and auto loan rates have risen in recent months.

## Measures of Investment

### INTEREST RATES

The Federal Reserve Open Market Operations are in a cyclical tightening period, designed to slow the acceleration of inflation. Economists believe an additional rate increase in December, followed by between one and three increases in 2019 are likely. Rate increases are typically 0.25 percent (25 basis points). *Figure 8* depicts the long-term history of the federal funds rate, the discount rate and the 30-year fixed mortgage rate. These rates obviously move together (co-integrated) and are near historical lows.

To understand better the effect of rate increases in the policy targeted federal funds rate, which influences bank lending and mortgages, we examined monthly data from 1971 through 2018. See *Figure 9*. A single rate increase (25 basis points) has a cumulative effect of increasing the discount rate by 35 basis points within

a year, and a nearly identical 25-basis-point increase in traditional mortgage products.

It is useful to again restate that the Federal Reserve conducts monetary policy under its dual mandate to address employment and inflation. Thus, its policy goal is to slow nominal economic growth and forestall inflation while maintaining full employment.

## FOREIGN TRADE AND INVESTMENT

The United States sells goods and services abroad, and buys them from foreign nations. We also purchase goods and services across county and state borders. All of these activities have the same effect on individual firms and households. *Figure 10* depicts the balance of trade for both goods and services. The size of the US trade deficit rose to its highest level in the most recent month.

It is also important to note that many citizens mistakenly believe that the trade deficit is caused by asymmetries in tariff rates, unequal wage rates, or environmental regulations. Rather, trade deficits are caused by a divergence between domestic savings and investment.

As with households, the total amount of consumption that a nation can enjoy, is bounded by the value of their income (GDP). Thus, the US government, business, and citizens can only buy as much as they can earn unless another nation is willing to lend them money. That loan of money, from one or more foreign nations, necessarily limits the consumption in those nations, who now must lend rather than consume. This is necessarily true, since the value of all the world's goods and services produced each year is identically equal to the value of all goods and services purchased each year, plus excess inventories.

Thus, for the United States to have a trade deficit, we must borrow those funds internationally. This is typically done through treasury securities and is known as the current account balance. The current account balance is thus the negative of the trade deficit. Tariffs may affect the type of imports and exports, but they do not affect the net level of trade.

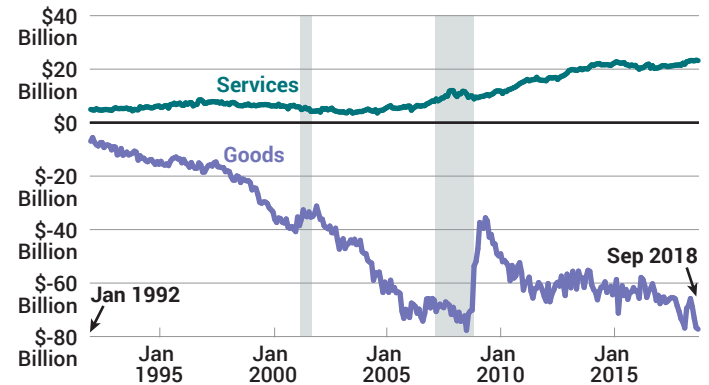
Examining the relative effects of the Tax Cuts and Jobs Act with the current increase in tariffs offers some clarity. The TCJA increased deficit spending, which will not be offset by the increased tariff revenue. This increased deficit spending resulting from the TCJA led directly to higher trade deficits, which set a new record in 2018 Q2.

Forecasting model results suggest the expansionary features of the TCJA are transitory, and will be overtaken by both monetary policy and the growing trade war through 2019 and beyond.

**Figure 10. US Trade Deficit in Goods and Services**

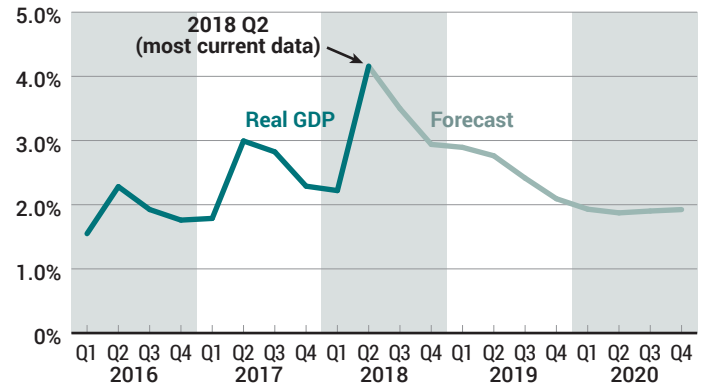
Source: Federal Reserve Economic Data (FRED)

Note: Recession years are marked in gray



**Figure 11. US Real GDP Forecast**

Source: Federal Reserve Economic Data (FRED)



## The 2019 Economic Forecast

### United States

Competing policy efforts, a higher than average two-quarter growth period, and deep uncertainty about the future economy all combine to introduce unusual forecasting risk. However, model results suggest the expansionary features of the TCJA are transitory, and will be overtaken by both monetary policy and the growing trade war through 2019 and beyond. Thus, we anticipate the US economy will continue to expand in 2019 but at a slower rate than in 2018. See *Figure 11*.

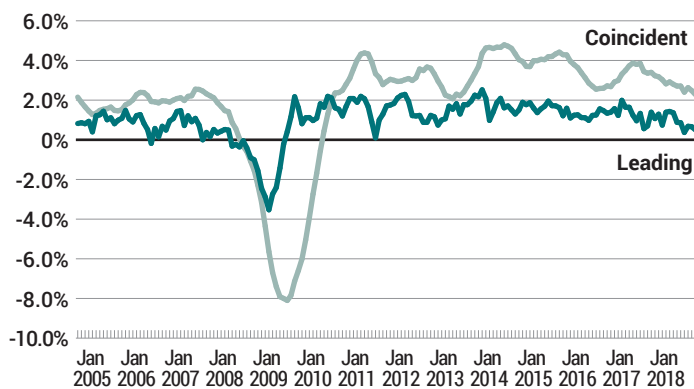
Growth will decline from a likely 3.2 percent in 2018 to 2.5 percent in 2019 and then to 1.9 percent in 2020.<sup>3</sup> The decline will be pronounced in the second half of 2019, with growth returning to its post-Great Recession norm of between 2.0 and 2.5 percent.

3. This and the other regional economic forecasts are derived by a method described in Hicks, M.J. 2008. "Forecasting State Level Economic Activity: An Error Correction Model with Exogenous National Structural Forecast Components." *National Tax Journal Papers and Proceedings*.

**Table 5. US and Midwest Forecast**  
Source: Author's calculations

	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019
USA	2.8%	2.4%	2.1%	1.9%	2.3%
Illinois	2.0%	1.6%	1.2%	1.0%	1.5%
<b>Indiana</b>	<b>2.9%</b>	<b>2.3%</b>	<b>1.8%</b>	<b>1.5%</b>	<b>2.1%</b>
Michigan	2.2%	1.5%	1.1%	0.7%	1.4%
Ohio	2.0%	1.6%	1.3%	1.0%	1.5%
Wisconsin	2.2%	1.8%	1.5%	1.3%	1.7%

**Figure 12. Leading and Coincident Economic Indicators**  
Source: Federal Reserve Economic Data (FRED)



## Midwest States

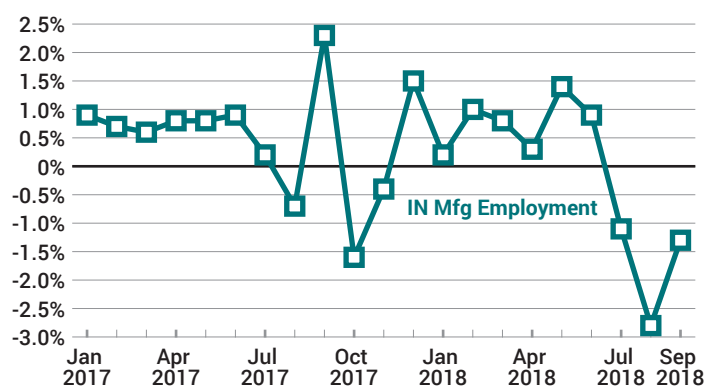
The state-level projections suggest a continuation of the stronger-than-typical growth through 2018 and into early 2019. See [Table 5](#). As the immediate effects of the TCJA are overtaken by the influence of tariffs and the anticipated monetary tightening (four rate increases December 2018-December 2019), we expect GDP growth to return to national levels consistent with the observed post-recessionary period. The Midwest will experience dampened economic activity consistent with the national economy.

One caveat to the likely experience in the Midwest is the speed of shocks to the current economy. The transmission of monetary policy is highly concentrated in new home construction and the manufacturing of consumer durables associated with new housing. This will have an effect on consumption in larger urban settings, where home value growth will ebb as demand for housing weakens. This wealth effect will reduce the growth in household consumption in larger metropolitan areas. It will also dampen demand for labor in those sectors producing housing-related goods.

The effects of the expanding trade war will be felt first in places producing goods with large imported elements. Transportation equipment, automobiles, business machinery, and consumer durables will be affected first. The Midwest is highly susceptible to these shocks, which differs from the 1990, 2001, and 2007 downturns.

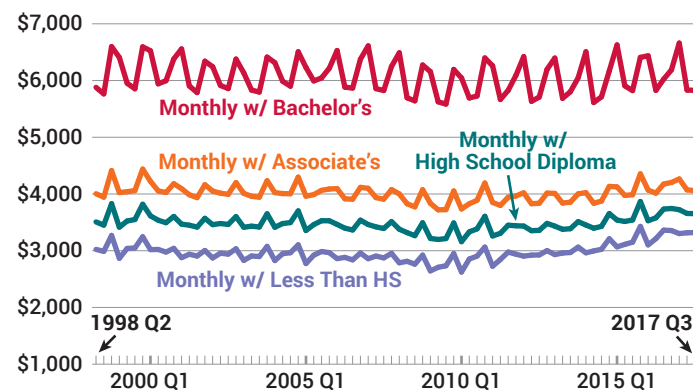
Risks to the accuracy of this forecast come from a suspension of new and proposed tariffs, or easing of monetary tightening

**Figure 13. Indiana Manufacturing Employment**  
Source: Federal Reserve Economic Data (FRED)



**Figure 14. Indiana Real Monthly Earnings by Education Level**

Source: Quarterly Workforce Indicators  
Note: Earnings for full-time employees who have been employed longer than one quarter with current establishment



through 2019. Otherwise, we anticipate 2019 to look more like the 2015-2017 period than like the first three quarters of 2018.

Leading and coincident economic indicators suggest a lengthy period of economic cooling, rather than accelerated growth in 2018. Other data sets that suggest a future slowing of the US economy include commodity prices, especially copper, which has decline more than 10 percent since the beginning of summer and a stagnant stock market. See [Figure 12](#).

## Indiana

Leading economic indicators for Indiana paint a less rosy picture; declines are visually evident by summer 2018. See [Figure 13](#). A decline in manufacturing employment provides additional evidence of a slowing state economy. As of October 2018, Indiana manufacturing employment has dipped beneath its December 2017 level. We expect job growth in Indiana to moderate to roughly 20,000 additional jobs by the end of 2019.

Flat real earnings growth is among the many economic challenges weighing on Indiana. With the exception of workers with less than a high school diploma, inflation-adjusted wages are not yet to pre-2001 recession levels. As [Figure 14](#) illustrates, Indiana workers have experienced no meaningful wage growth in two decades.



## Local Population Projections

Locally, population in East Central Indiana (Blackford, Delaware, Jay, and Randolph counties) is projected to continue in decline through 2050. Data for *Figure 15*, adapted from Hicks and Wornell (2018), contains US Census decennial counts, from 1970 through 2010, the annual intercensal estimates, and projections performed by the Indiana Business Research Center.

Population loss will lead directly to a relatively smaller regional economy in the coming decades. Places with declining population have been especially sensitive to economic shocks in recent decades and are unusually vulnerable to changes in trade and automation patterns. These shocks tend to reduce labor force participation, worsen family structures, lower subsequent levels of educational attainment, and lessen healthcare outcomes.<sup>4</sup>

This decline is consistent with the region's history of population and economic decline dating to at least the 1970s. Muncie has had an especially bad 21st century, along with much of the East Central Indiana region. Gross domestic product in Muncie declined 7.0 percent from 2001 through 2017, making it the seventh worst performing metro area out of 383 cities in the United States this century. Over this time, the standard of living dropped by more than 3.0 percent. See *Figure 15*.

### POPULATION EFFECTS ON HOUSING

Population decline reduces the value of housing stock and reduces the profitability of new home construction. This in turn tends to act as a magnet for households with lower levels of human capital, reducing outmigration among lesser-educated workers and inducing in-migration among low-income households (Glaeser and Gyourko, 2005). This in turn results in regional economic divergence across metropolitan areas (Hicks, 2010).

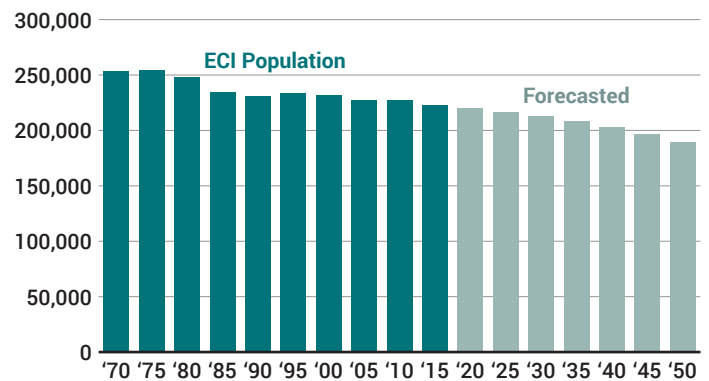
### POPULATION EFFECTS ON EMPLOYMENT

Evidence of this divergence appears in the cumulative growth of employment in East Central Indiana from 1998 through the fourth quarter of 2017. Over this time period, employment among high school graduates declined by more than 13,000 workers (27% decline). There are almost 6,000 fewer workers who hold an associate's degree or have been to college (14% decline), and more than 3,000 fewer workers with a college degree (12% decline). Workers without a high school degree have experienced greater stability, losing only 1,300 positions, or roughly 10 percent of their total employment. Moreover, this share of the labor force has been growing since the Great Recession. See *Figure 16*.

A feature of this declining economy is the decline in real wages for all three groups of better skilled workers. Monthly inflation-adjusted wages for workers with a bachelor's degree, those with an associate's degree/some college, and those with a

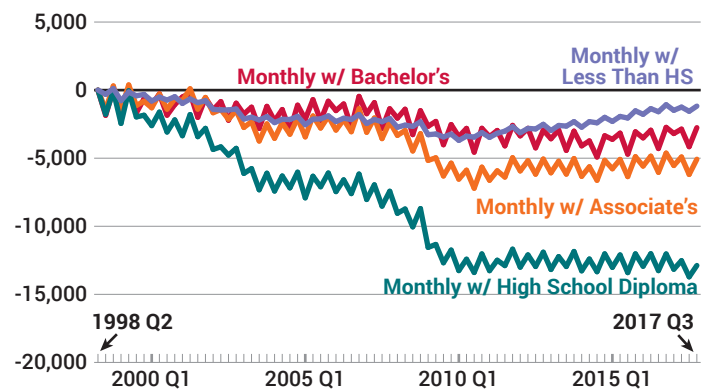
**Figure 15. Population Growth in East Central Indiana (Blackford, Delaware, Jay, and Randolph Counties)**

Source: US Bureau of the Census, US Bureau of Economic Analysis, and Indiana Business Research Center



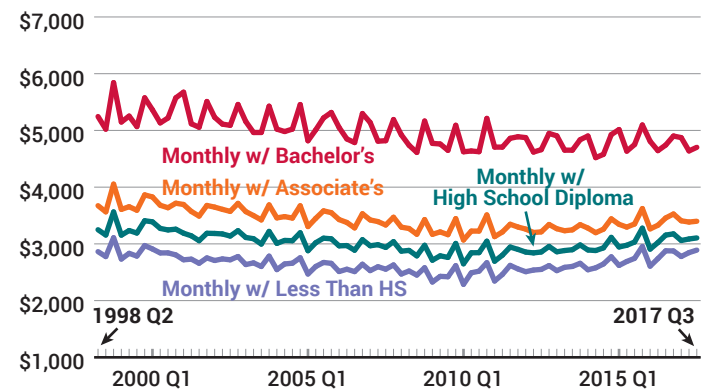
**Figure 16. Cumulative Employment Change in East Central Indiana by Education Attainment, 1998-2017**

Source: Quarterly Workforce Indicators



**Figure 17. Real Wages in East Central Indiana by Educational Attainment, 1998-2017**

Source: Quarterly Workforce Indicators



high school diploma are all lower than in 1998. In East Central Indiana, wages have risen only for workers without a high school degree. See *Figure 17*.

4. See Devaraj, S., M.J. Hicks, E.J. Wornell, and D. Faulk, 2017; and Patel, P., S. Devaraj, M.J. Hicks, and E.J. Wornell, 2018.

## Summary

The United States economy is in its ninth year of expansion, with labor markets performing strongly. The unemployment rate is now beneath all common estimates of full employment, and wages have growth over the year of nearly 1.0 percent above the traditional consumer measures of inflation.

**GDP growth** in 2018 was stronger than in 2017, but not historically unusual, even for this relatively slow recovery. Promoting growth in 2018 was the Tax Cuts and Jobs Act, which motivated **higher consumer spending**. The TCJA lacked a large investment stimulus and resulted in much larger budget deficits, which causally increased the trade deficit through 2018.

The monetary policy response is the inevitable tightening, which has seen **policy and market rate increases** throughout 2018. We anticipate between two and four further rate increases from the Federal Reserve by the end of 2019. The combination of rate increases and a **growing trade war** are offsetting the further effects of the TCJA in late 2018 and, as we project, through 2019.

Leading and coincident economic indicators point towards a worsening economy after mid-2018, as do indicators of manufacturing and consumer spending strength.

The combined effects of TCJA, monetary policy, and a widening trade war will reduce the pace of economic growth in 2019. While we expect the pace of US GDP growth to be at or near 3.0 percent in 2018, we expect it slowing to 2.3 percent in 2019. **Indiana's economy will grow more slowly at 2.1 percent**, and will add roughly 20,000 jobs over 2019. Labor supply growth will stagnate in the short-to-medium term.

**Growth in the greater Muncie and East Central Indiana will again be extremely moderate.** GDP growth in 2018 and 2019 will likely be positive, but insufficient to return the city or region to levels observed in 2000-2001. **Population decline will continue, placing pressure on public and private institutions through the middle part of the 21st century.** The accelerating pace of urbanization combined with risks from trade, and especially automation-related job losses, challenge most of East Central Indiana. The only likely places to be spared lengthy economic stagnation are those with high-quality public services (e.g. schools) that are sufficient to attract new residents.

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### FORECAST AVAILABLE ONLINE

This forecast is produced in conjunction with the Indiana Economic Outlook 2019 event, held December 12, 2018 in downtown Muncie, Indiana. Presentation slides and a PDF of this forecast will be available at [bsu.edu/cber/outlook](https://bsu.edu/cber/outlook) in our archives.