THE ECONOMIC SITUATION

March 2020

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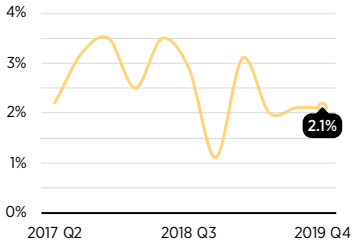
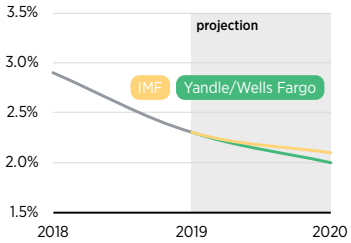
KEY ECONOMIC STATISTICS

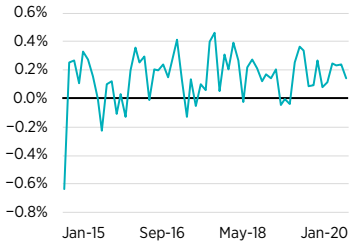
Current Quarterly GDP Growth



Projected Annual GDP Growth



Monthly Percent Change in US Consumer Price Index



With three months of economic activity under America's belt and with major uncertainty owing to the raging coronavirus, it's time to examine 2020's launch and consider the evolving economic situation.[1] In doing so, it may be helpful to look back to this time in 2019 and recall how the economy was performing then. When 2019 opened, there were expectations that GDP growth, which exceeded 3.1 percent in 2019's first quarter, would stay close to 3 percent, but that because of accelerated lending and money creation, America would experience rising inflation and more Fed-driven interest rate increases. Even though there had been an extended December-January government shutdown and growing interference with trade, hope for a Goldilocks just-right economy was riding high.

This high hope was soon dashed by slowing GDP growth caused by a combination of the government shutdown and accelerating trade war. The lagged effects of these factors and more were registered in the suddenly pale 2.0 percent real GDP growth of 2019's second quarter. Now, looking back at 2019, one finds that the year-over-year rate of growth in employment peaked in January 2019 and fell systematically after that time, as did the rate of growth of bank lending, export shipments, and industrial production. People now know that the US factory economy received a trade-war shock. Instead of heading toward a Goldilocks 3 percent growth rate, the economy settled down to a sleepwalking two-and-a-fraction growth rate. And instead of seeing rising inflation and interest rates, people saw just the reverse: inflation remained subdued and interest rates fell.

NO 2020 RECESSION EXPECTED

As the books began to be closed on 2019, estimated fourth-quarter real GDP growth was 2.1 percent, the same level as for the third quarter, and

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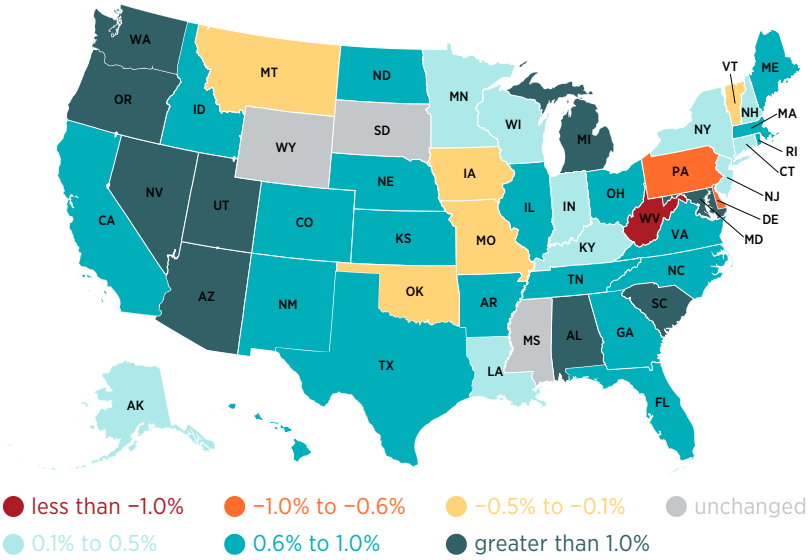
about the same as the second quarter's 2.0 percent.[2] 2019's final reckoning will show 2.3 percent annual growth. This prediction leaves one with the usual important question: Will the 2020 economy slow down even more or fall into a recession? Let me offer a quick answer: the effects of the coronavirus already assure slowing world and US economies. That said, I still believe the US economy will not slip into a recession.

At this writing, I expect that the US economy will register 2.0 percent real GDP growth in 2019, that inflation will be tamed by the slowing world economy, registering less than 2.0 percent as measured by the Consumer Price Index, and that the 10-year Treasury note will close the year with a yield of about 1.7 percent.

Of course, the economic effects of the coronavirus and related shutdowns of major cities across the world form a big unknown. But while the full dimensions of this viral outbreak cannot be determined accurately, it is possible to make some very crude estimates of the effects on the US economy and my otherwise expected 2.0 percent GDP growth. I do this first by focusing primarily on China and pointing out that China is the destination of some 10 percent of US exports and that exports form some 13 percent of US GDP. If the coronavirus were to have an effect equal to the loss of all US China exports, the United States would lose 10 percent of 13 percent of GDP. Put another way, this loss would subtract 1.3 percentage points from America's projected 2.0 percent 2020 growth. This would leave a US growth rate of just 0.7 percent but still not place the US economy in a recession. I recognize that although there are critical supply chain and other disruptions to consider, given the relative magnitudes of US-China linkages, I believe coronavirus will not tip the US economy into a recession.

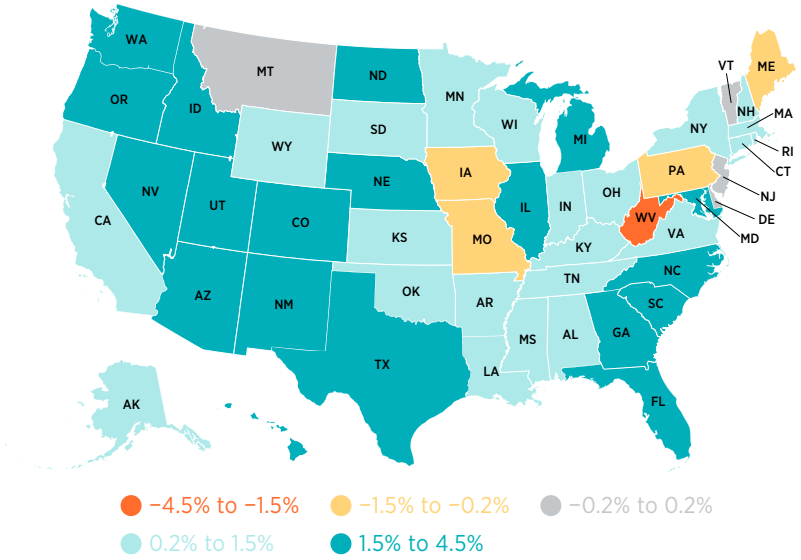
Still acknowledging that the coronavirus's effects are not yet registered in the data, my expectations are more generally strengthened by the monthly charts from the Federal Reserve Bank of Philadelphia showing (in figure 1) the current

FIGURE 1. DECEMBER 2019 STATE COINCIDENT INDEXES: THREE-MONTH CHANGE



Source: "State Coincident Indexes," Federal Reserve Bank of Philadelphia, last updated January 29, 2020, https://www.philadelphiafed.org/research-and-data/regional-economy/indexes/coincident/.

FIGURE 2. DECEMBER 2019 STATE LEADING INDEXES



Source: "State Leading Indexes," Federal Reserve Bank of Philadelphia, last updated February 4, 2020, https://www.philadelphiafed.org/research-and-data/regional-economy/indexes/leading/.

situation and (in figure 2) leading indicators for personal income growth across the 50 states. The leading indicators predict outcomes six months out. Here, I report December 2019's charts. When comparing the two charts, notice the number of states in figure 1 with greater than 1.0 percent growth and how in figure 2 the number of states with 1.5 to 4.5 percent growth is greater. These charts provide a comparison between December 2019 and June 2020, a snapshot for the first half of the year.

How the Report Is Organized

There are, of course, new developments to consider, ongoing policy actions to assess, and thoughts about the future to convey. Among these are a presidential impeachment and new trade agreements. There is also a presidential election in the works, with lots of related arguments about what may be the best future policies for our county. In the following section, I offer thoughts on the political economy, that mixture of economics and politics that informs on economic performance and pending political activities. This section, which will include a discussion of long-run attitudes about the future, will be followed by a section on some of the political promises being made in the ongoing pursuit of the presidency and how those promises may relate to the prospects for prosperity. Discussions about trade are included in that section. In concluding sections, I put the state spotlight on Idaho and offer reviews of two books from Yandle's reading table.

OPTIMISM AND PESSIMISM ABOUT AMERICA'S POLITICAL ECONOMY

With an impeachment trial in the past and new trade agreements signed with Canada, Mexico, and China, what might one make of it?[3] How should one view the political-economic landscape and the long-run outlook? Are expectations high? Low? Both? Let's take a look.

In a year-end assessment, *Wall Street Journal* columnist Gerald F. Seib put his finger on what looks like a major puzzle.[4] The matter had to do

with a *Wall Street Journal*–NBC News poll that revealed unusually positive public assessments about how the economy is performing and yet reported an extraordinarily low evaluation of President Donald Trump's performance.

This mixed message may relate to something I picked up on recently when I surveyed some colleagues, asking if they were optimistic about the future. Most were generally very optimistic, but some serious reservations were also expressed. I will offer more on this later. For now, let's get back to Mr. Seib's puzzle.

According to the polling data, when asked what they considered to be the most important story of 2019, more Americans cited the economy than any other topic. And what did they think about the economy? The percentage that said the economic performance was the best in years stood at 34 percent, the highest in 30 years. Looking ahead, some 40 percent of those polled said 2020 will show gains over 2019, and only 23 percent saw slower GDP growth ahead. In a nutshell, the polling data revealed a spirit of high optimism about current and future economic well-being.

But here's the puzzle: high satisfaction with the economy usually translates to strong presidential performance ratings. Not this time. Instead of seeing approval rates of well over 50 percent, which normally might be expected, President Trump's rating rests at a low 44 percent. Illustrating the extent to which America is divided, some 48 percent of those polled said they will vote against President Trump no matter whom the Democrats nominate.

It stands to reason that the low presidential assessments are not about the economy. By many measures, partly because of Trump's tax cuts and deregulation, the economy is chugging along at a healthy pace. Employment is high, wage increases are outstripping inflation, housing starts are accelerating, consumer spending is taking off, the S&P 500 is hitting new highs, and median family net worth is improving.

With respect to election-year politics, think about it this way for a minute: American democracy delivers leaders who reflect the people, but given the ways in which the American voting system operates, this reflection is somewhat distorted—a funhouse mirror of sorts. Sometimes, the people like what they see in that mirror. They like the direction the country is heading and see a handsome likeness. And then there are times when they don't like the distortion at all. They think the country is headed in the wrong direction; that this is not who they want to be. Indeed, more than half of those polled in the *Wall Street Journal*–NBC News survey said that the nation is on the wrong track.

It's during the times when people see a distorted reflection that some may realize that there is more to future well-being than better jobs, more income, fancier cars and homes, and flourishing stock portfolios.

I tapped into this a few weeks ago when I sent questions about the future to about 40 friends and colleagues, asking them to think about the next 50 years and how their grandchildren might fare. Would the prosperity their grandchildren experience be greater, less, or about the same? The response was overwhelmingly positive, with some 85 percent seeing a very bright future for their offspring. But there were some reservations expressed even in the more optimistic messages. And there were the 15 percent who thought the future is not so bright.

What were the reservations, and how might the more pessimistic thoughts relate to President Trump's low approval ratings? One respondent

provided some insight here, but did not mention President Trump or politics at all—his concern was deeper:

> I think the world of the future will be better economically, medically, technologically and educationally. But I think that familial, psychologically, spiritually, and morally the world 50 years from today will be the same or worse. Advances in economics, medicine, technology, education and, I would like to add, the incredible personal freedom we now have, will not make the world better. It takes something more. The spiritual, psychological, familial and moral have been grossly weakened, deformed or significantly disregarded. . . . So I am optimistic in many ways, but not all.

As America enters presidential primary and caucus season, people might acknowledge that whatever problems they see in society are chiefly about them, not their elected officials. The officials are a reflection—distorted for better or worse—of who they are. That's encouraging in a sense. Rather than fretting and blaming, Americans can work to change their own behavior.

WHAT ARE PROSPERITY'S PROSPECTS, GIVEN POLITICIANS' PROMISES?

With lots of presidential hopefuls promising loads of goodies to supporters if elected or reelected, it seems appropriate to ask where all those wonderful goodies will come from.[5] Having a larger and more dynamic overall economy in the form of more GDP to go around would surely help.

Otherwise, the distribution of goodies will have to be funded in one of three ways: (1) with politically unlikely spending cuts to other government programs; (2) with more debt, which must eventually be paid off with more taxes; or (3) robbing Peter to pay Paul, which means placing higher taxes on one group to fund benefits for another group.

Unfortunately, the prospects for significantly higher economic growth right now are rather bleak, because more GDP growth comes by way of two—and only two—activities: more people going to work every day and more capital (human and otherwise) accumulating to make workers more productive. Therefore, the dedicated politician should look for ways to get these two growth-stimulating activities heading in the right direction.

The latest census estimates show that the US population growth rate for 2018–2019 was just 0.5 percent.[6] This was the lowest level in 100 years, making slim pickings for more people going to work. Included in the sharp decline were 595,000 fewer international migrants, a number that has been falling annually since 2016.[7]

To complicate things further, the US Department of Labor offers no help on labor productivity gains. Third-quarter 2019 labor productivity growth came in with a negative number, and the average gain has been just 1.3 percent from 2007 through 2018, which is half the level of the previous seven years.[8] Low growth in the labor force coupled with low productivity growth leads to low GDP growth, which makes it challenging for hopeful politicians to deliver the goodies.

Now consider the looming shopping list. From different candidates, there are promises of college debt forgiveness, government-provided healthcare for all, free two-year technical college education, expanded maternity leave and preschool childcare, increased farmer subsidies, more miles of border fences, and higher government spend-

ing to increase ownership of electric vehicles. And this just begins to explain why more GDP growth would help to fulfil political promises.

Considering GDP Growth

And now back to the data. How does the current GDP growth challenge compare with past years? Figure 3 shows quarterly growth rates for the labor force and productivity summed together for the years 1990 through 2019's third quarter.

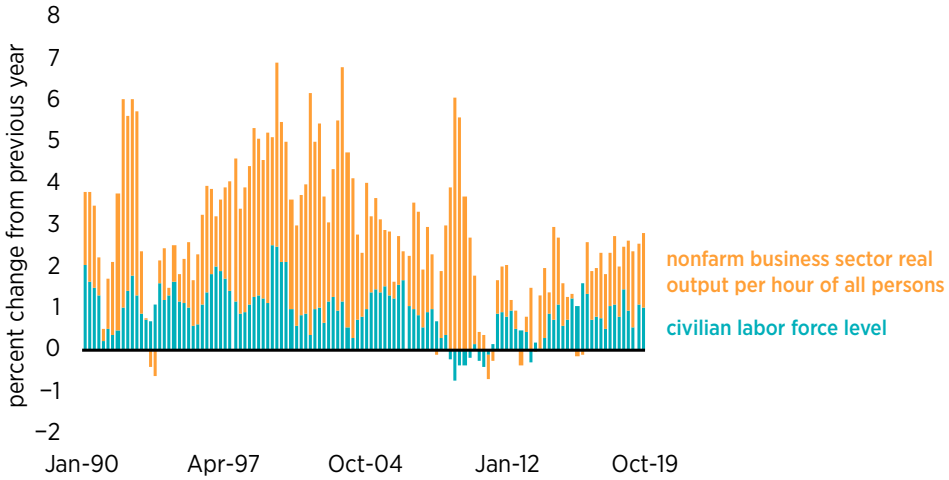
For reasons already mentioned, the summed values set the speed limit for GDP growth. In the most recent period, the limit is close to 2.5 percent. Looking back, one can see just how pale this number is compared with earlier periods. Consider the early 2000s when the combined value was regularly soaring above 4.0 percent. Upon inspection, one sees that those higher levels were driven mainly by productivity improvements. After all, this was the time of the IT revolution. But one can also see that there was high growth in the labor force. Baby boomers were still in the labor force and their children, millennials, were coming to the fore.

Understanding the apparent limitation on growth in the immediate future and the politician's proclivity to promise more than the economy can deliver, what words of advice might one offer?

It's simple enough. When designing benefits to be delivered to those who may vote, sprinkle in a few promises that will make the economy more productive, keeping in mind that in some cases what frees up the economy may affect some other promises.

To get more GDP growth, think about ways to open the gate to more qualified immigrants who will join the labor force. Consider proposals that will reduce the tax burden that falls on workers who may be thinking about reentering the labor force. Remember that higher Social Security and Medicare benefits, which may sound good, are funded with payroll taxes that must be paid by workers themselves. Also keep in mind that mandated benefits of any kind

FIGURE 3. US LABOR FORCE AND LABOR PRODUCTIVITY GROWTH, Q1 1990–Q3 2019, YEAR-OVER-YEAR PERCENT CHANGE



Source: "Civilian Labor Force Level" (dataset), Federal Reserve Bank of St. Louis, accessed February 10, 2020, https://fred.stlouisfed.org/series/CLF16OV; "Nonfarm Business Sector: Real Output per Hour of All Persons" (dataset), Federal Reserve Bank of St. Louis, accessed February 10, 2020, https://fred.stlouisfed.org/series/OPHNFB.

funded with corporate taxes will ultimately limit wage growth.

Turning to productivity, think about ways to reduce taxes on capital and on capital gains so that workers will engage with the latest and most lasting capital goods, including the latest computers, software, and energy-conserving technologies.

Trade War Effects

In a recent *Wall Street Journal* op-ed, presidential trade adviser Peter Navarro painted a picture of the bountiful economic effects of President Trump's antitrade tariff programs.[9] Indeed, he credited the tariffs with everything from the current 50-year low in the unemployment rate to last year's rise in median family income and the seven million jobs added to the economy during the Trump years. Strangely enough, a pair of previous Trump administration officials had already credited another Trump policy—tax cuts—with these same improvements.[10] Looks like we need a bragging rights referee.

It was just a few weeks ago, in a December 22, 2019, *Wall Street Journal* op-ed, when Kevin Hassett, former chairman of the Council of Economic Advisers (CEA), and Gary Cohn, a former CEA colleague, pointed out that the Trump tax cuts generated the very same enhanced economic activity. Hassett and Cohn referred to their earlier written forecast that identified the future macroeconomic benefits that would come with the tax cuts; they understandably celebrated the accuracy of their forecast. They made no mention of President Trump's accelerating trade wars lifting all the boats.

Next, let's examine several aspects of Navarro's argument. He asks that readers be patient before being too critical of tariffs, pointing out that there is more going on here than just matters of trade. There are also troublesome property rights and government subsidy policies, especially with China, that need to be addressed. As people have heard many times before, the trade wars may be a way of getting China to change these policies.

Navarro takes strong exception to tariff critics who have regularly written in favor of freedom and open markets and who frequently note that tariffs are taxes paid by ordinary Americans who ultimately bear the burden of trade wars. I readily admit that I am one of those critics.

Focusing primarily on China, Navarro never mentions the tariffs imposed on Canadian timber and milk products and on steel and aluminum from global producers. Nor does he mention tariffs on an array of French consumer products, including wine and champagne, and the earlier threat that the United States might impose tariffs on EU-produced cars.[11] And he does not touch on President Trump's August 2019 warning that US corporations should prepare to move their China operations back to the homeland, a remark that triggered the largest surge in economic policy uncertainty that occurred in all of 2019.[12]

Somehow, Navarro's message seems to be that tariffs are wonderful devices that, if continued, may make Americans all rich. He does not suggest that the United States impose 100 percent tariffs on everything that comes into the country, but he does close his comment by saying, "Americans should welcome this analysis warmly—especially in the heartland, where the ugly predictions of the anti-tariff forecasters seem so out of touch with the beautiful realities of the Trump economy."

So what are we to make of Navarro's strong protariff position? Or of his single-minded China focus and the neglect of other tariffs now imposed almost globally? And his claim that by putting

more tariff rocks in our harbors to keep out foreign goods, Americans can all become richer?

I suggest that Americans have heard this before, and these ideas don't work. Forcing higher prices on all Americans by way of tariffs and limiting their choices as consumers simply cannot make everyone better off. Yes, tariff-protected firms may gain some temporary relief from the winds of world competition. But protecting the few by penalizing the many is no sustainable path to prosperity. Indeed, this is just what Federal Reserve economists Aaron Flaaen and Justin Pierce find in their recently completed study of 10 primary industries hit by US and retaliatory tariffs.[13] They examine the trade war effects on producers of magnetic and optical media, leather goods, aluminum sheet, iron and steel, motor vehicles, household appliances, sawmill products, audio and video equipment, pesticides, and computer equipment. In their analysis, Flaaen and Pierce identify industry and employment benefits that accrue with US tariffs before retaliation by the affected countries. They then isolate the effects of retaliation and later US expansion of the goods to be covered by tariffs. When considered together, the losses to the US economy are larger than the gains. They conclude, "We find that tariff increases enacted in 2018 are associated with relative reductions in manufacturing employment and relative increases in producer prices."[14]

Yes, the economy is in good shape. Although GDP growth is low, wage gains now exceed inflation, employment opportunities are exceptionally high, and retail sales and housing markets are strong. As Hassett and Cohen point out, it's clear that tax policy deserves credit for most of this.

And yes, it is possible that US trade war efforts may bring beneficial change in China's trade policies, and the recently signed Phase One trade agreement offers real promise.[15] But let's not confuse tariffs as a political tactic with tariffs as economic policy for its own sake. The longer America endures the pain for bringing change, the larger the offsetting future benefits must be, if and when they arrive.

STATE SPOTLIGHT: IDAHO

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Each quarter, we select one state and analyze its economic and regulatory outlook. Last quarter, we put Delaware in the spotlight. In previous quarters, we have examined Colorado, Hawaii, Illinois, and New Mexico, among others. This quarter, we focus on Idaho.

Geographically, Idaho is shaped primarily by its proximity to the Rocky Mountains. It is the 14th-largest state, with a land area of 83,600 square miles and an estimated population of 1.75 million inhabitants in 2018.[16] The state has over 2,000 lakes and an abundant supply of groundwater. These water resources contribute to a high rate of renewable energy usage (31 percent, versus the US national average of 11 percent).[17] Much of that renewable electricity is generated in the form of hydropower by dams along the Snake River.[18] These factors

contribute to booming lumber, fishing, and tourism industries, which generate a proportionally huge $3.7 billion annually and revolve around skiing and outdoor activities.[19]

Idaho's rural and rugged landscape has a noticeable impact on its economic composition. Agriculture, forestry, fishing, hunting, and construction account for a higher percentage of overall employment than for the United States on average. Conversely, the professional, scientific, and technical services; finance; and insurance sectors all employ a lower percentage of the state's residents than they do in the United States on average.[20] The prevalence of agriculture in the employment statistics is not surprising; Idaho produces a third of all potatoes grown in the United States,[21] although milk is the state's primary farm product.[22] Interestingly, agricultural sales seemed unscathed by the trade war in 2019, as net farm income exploded to a record $2.7 billion in 2019 following a decade of extreme volatility. [23]

Despite this slant toward agriculture and natural resources processing, Idaho seems to be making a push to improve its technology-related industries. Examples of said prowess include the heavy presence of technology companies such as semiconductor manufacturer Micron Technology and software firm Clearwater Analytics, important research on nuclear technology being done at the Idaho National Laboratory,[24] a high amount of electrical equipment exports,[25] and a number of innovation initiatives along the lines of an annual robotics festival hosted by the city of Coeur d'Alene.[26] These examples notwithstanding, Idaho's tech environment is still in its infancy, and a lot of these numbers seem to be propped up by Micron Technology, which is the second biggest employer in the state (at 35,000 employees) in a list of top employers that is otherwise filled with retailers, hospitals, food and lumber products manufactures, the state government, and a lone back-office services company.[27]

RECENT STATE AND MOUNTAIN REGION GDP GROWTH

As with some of the other mountain states, Idaho's economy started at a low base but has been growing quickly in the past two years. As of the third quarter of 2019, Idaho had a GDP of $81.5 billion,[28] and as of 2018 Idaho had a GDP per capita of about $40,189.[29] Taking cost of living into account, the adjusted median wage for Idaho entering 2020 was $36,800, which ranks it at 45th.[30] The median income for Idaho residents has not caught up to the state's relatively high cost of living.[31]

Fortunately, Idaho has been growing relatively quickly in recent years. Idaho's real GDP per capita compound annual growth rate between Q3 2018 and Q3 2019 (the most recent data available) was 2.8 percent, versus a national average of 2.1 percent.[32] The 2019 unemployment rate hovered around 2.9 percent, versus a national average of around 3.6 percent,[33] while the rate of job growth at 2.9 percent significantly beat the 1.2 percent national average over this period.[34]

The regional context for these statistics reveals a number of trends. For 2019, the states in Idaho's immediate Northwest/Rocky Mountain neighborhood can be split into two camps according to wealth and growth. The first camp includes states in the highly enviable position of having a high GDP per capita *and* high growth rate. This includes Colorado, Washington, and Wyoming. The second camp includes states that have a low GDP per capita but high growth rate. In order of highest to lowest growth rate these states are Utah, Nevada, Idaho, Oregon, and Montana. In other words, Idaho is a poor state by US standards, with a growth rate that is mediocre for its region, *but* that region as a whole has recently been growing faster than the rest of the nation.[35]

STATE PERFORMANCE RANKINGS

The structural and political fundamentals of Idaho's economy match the reality of a lower-than-average economic base but higher-than-average growth rate. A wide array of "state economy" and "best states for doing business" rankings reflect the same overall narrative about Idaho: it does poorly in terms of resources (low workforce education and fewer workers with advanced technical skills, less access to financial capital, low in some

measures of tech innovation, etc.), but it does quite well in terms of business friendliness (low business costs, less regulation, high startup rate, etc.). Depending on how each list weighs these factors, Idaho ranks between #2 and #29, with the average score skewed toward the low teens.[36]

Specific data points support the overall narrative of these various state rankings. While the state's student test scores are above average and the high school graduation rate has reached a record of 80 percent (against a US average of 85 percent),[37] Idaho ranks 40th among states for the proportion of the population with a bachelor's degree or higher (26.8 percent) and 43rd for the proportion of residents with advanced degrees (8.5 percent).[38] These statistics comport with the state's low performance on metrics of workforce education.

On the positive side, the state is among the best in terms of fiscal health and regulatory burden. It has the 39th highest (or 11th lowest) personal tax burden, with residents paying 7.75 percent of their income on combined local and state taxes on average.[39] The state government ranked 7th in the 2018 state fiscal health rankings produced by the Mercatus Center at George Mason University, on account of low government debt, a regularly balanced budget, and a low ratio of liabilities to assets.[40] Interestingly, despite its business-friendly reputation, its corporate income tax rate is near the average for states, at 6.93 percent. This indicates that Idaho's business-friendly reputation rests more on low operating and regulatory costs than on low tax rates. The Idaho state government is certainly eager to welcome and please businesses, if the Idaho Department of Commerce's website is any indication. Out of all the state's we've looked at, Idaho has some of the most advanced resources available to prospective businesses, including detailed county-level maps with demographic, geographic, and utility data. It also promotes a bevy of generous tax credits and infrastructure subsidies for new businesses.[41]

IDAHO'S REGULATORY OUTLOOK

Idaho's regulatory code is published by the Office of the Administrative Rules Coordinator and can be found on the office's website.[42] The regulatory code is divided by subject matter and by the departments, councils, offices, and commissions that exist in Idaho's government.

Idaho has one of the most unique regulatory landscapes in the United States. Idaho's existing body of regulation expires on a yearly basis unless it is reauthorized by the state's legislative body. In 2019, owing to a combination of political turmoil and a governor inclined to cut red tape, the state's regulatory code was not reauthorized and every regulation was set to expire.[43] As this process unfolded, the lack of reauthorization switched the "burden of proof," as stated by Mercatus Center scholar James Broughel. Instead of the governor having to justify why regulations would need to be cut, regulating bodies within the state needed to justify why regulations deserved to be kept.

The process of justifying each regulation has led to the apparent removal of nearly half of the regulations in Idaho's regulatory code. Governor Little of Idaho claims that, out of the original 72,000 regulatory restrictions in the code, 30,936 have been eliminated, making the state potentially the least regulated state in the country.[44] If these new numbers hold, the governor of Idaho would be correct. According to the State RegData project at the Mercatus Center, as of 2019 South Dakota was the least regulated state, with 43,940 regulatory restrictions. Idaho's revised numbers would sit around 41,000.

Regulatory restrictions, as defined by the Mercatus Center and Idaho, are legally binding terms such as *shall*, *must*, *may not*, *prohibited*, and *required*. The most recent report on Idaho published by the Mercatus Center finds that, in September 2018, the state had 61,848 regulatory restrictions and five million words in its regulatory code. Idaho's internal counting of regulatory restrictions found 72,000 in 2019, a little over a year later.

According to the Mercatus Center's 2018 report, the most regulated industry in Idaho is healthcare.[45] Using the three-digit North American Industry Classification System (NAICS) codes, Nursing and Residential Care Facilities (subsector 623) and Ambulatory Health Care Services (subsector 621) were the most regulated subsectors

with 1,989 and 1,988 regulatory restrictions, respectively. Chemical Manufacturing (subsector 325) and Animal Production and Aquaculture (subsector 112) are also highly regulated at 1,922 and 1,832 restrictions, respectively.

The high healthcare industry numbers line up with the report's findings on the regulatory body within Idaho that is doing the most regulating. The Department of Health and Welfare of Idaho is responsible for 12,373 regulatory restrictions. The next-closest regulating body is the Department of Environmental Quality, at 6,990 regulatory restrictions.

CONCLUSION

For those readers who remember the Delaware spotlight from last quarter, Idaho is in many ways the inverse. Delaware's economy boasts a highly educated, highly paid, and technically proficient workforce, but its government ranks lower on measures of fiscal health and is not business friendly, leading to an economy that is uniquely stagnant amongst states in the Northeast. Idaho's economy, in contrast, has a less skilled workforce with lower access to capital, but a high level of business friendliness and economic dynamism that may have helped put its growth rate on par with the other fast-growing Mountain Region and Northwest states. Federal Reserve Bank of Philadelphia leading indexes and predictors for Idaho are even more robust than similar metrics in our analysis. The bank's leading index lists Idaho as the eighth-strongest economy over the upcoming months.[46] Though Idaho is a generally poor, inland state, without strong oil, manufacturing, or technology industries, it will be interesting to see if its business-friendly environment and economic openness allow the state to retain its currently high growth rates into the upcoming years.

YANDLE'S READING TABLE

Robert Shiller's *Narrative Economics: How Stories Go Viral and Drive Major Economic Events* starts from the gate with an ambitious statement that includes a definition of the topic announced in the book's title: "This book introduces an important new element to the usual list of economic factors driving the economy: contagious popular stories that spread through word of mouth, the news media, and social media."[47] Obviously a good teacher, Shiller introduces this point earlier in the book: "An economic narrative is a contagious story that has the potential to change how people make economic decisions, such as decisions to hire a worker or to wait for better times, to stick one's neck out or to be cautious in business, to launch a business venture, or to invest in a volatile speculative asset."[48] The well-written book, which is filled with delightful anecdotes well related to the book's theme, contains four major parts. The first introduces narrative economics. The second lays out foundational concepts. The third addresses perennial narratives that focus primarily on macroeconomic matters. And the fourth addresses the future of narrative economics.

Yes, Shiller is talking about stories that people tell, narratives, with repeating elements that help to form and alter social norms and that provide a basis for decision-making. But he is quick to point out that he is not just talking about any stories that may be told around the campfire—though some may qualify. He is talking about stories that go viral in the media, in books, in news articles, and in the performing arts while engaging a population in much the same way that an infectious disease would spread. Indeed, throughout the book and in some detail in the book's appendix, Shiller refers to the infectious disease analogy. Yet there is still even more to the narrative economics story. There can be multiple related narratives, which Shiller

terms constellations. A combination of compatible and reinforcing (and sometimes sequential) narratives can amplify and extend similar messages or themes.

Shiller moves quickly in the book's first chapter to describe a recent narrative that went viral. The subject is bitcoin, a cryptocurrency that was launched in 2009 and based on an academic paper by Satoshi Nakamoto that was first distributed in 2008.[49] No one knows the identity of the pseudonymous person (or persons) Nakamoto. Despite that, following a widely swinging path, the market value of bitcoin rose from $0 in 2009 to more than $200 billion in 2014 and in late 2019 was moving along at $133 billion.

Bitcoin is a currency that can be used anywhere there are people who can and will accept it. It is an unregulated medium of exchange that is based purely on free-market forces. I should point out that Bitcoin is not a firm that someone owns, any more than someone owns open-source email software. It is owned by the users. So how does narrative economics explain the fact that a vast number of investors and economic agents worldwide would swarm to buy and produce bitcoins? Shiller's explanation first includes anarchy (Bitcoin's appeal to people who are attracted to institutions that replace government), worldwide excitement about new computer-based technologies, a libertarian desire to do things by oneself, and a perception that the total number of bitcoins that can be circulated is set absolutely; that is, unlike conventional currencies, there is no inflation problem.

In developing his explanation, Shiller briefly covers a period in the 19th century when anarchy became viral. He then discusses the 2011 Occupy Wall Street movement and how the Occupy protest spread across many other countries, motivated all along by a desire for individual empowerment. Added to this narrative constellation was a desire by people worldwide to be a part of a high-tech, computer-based phenomenon that they could easily join.

In an effort to widen the market for narrative economics, Shiller makes a plea for cutting the boundary barbed wire that separates academic disciplines. He makes a strong appeal for consilience, "the unity of knowledge among the academic disciplines,"[50] and devotes a chapter to the topic. In doing so, he joins others such as biologist E. O. Wilson,[51] who invented the field of sociobiology; Paul Rubin,[52] who drew on evolutionary biology, anthropology, and other social sciences in an effort to explain the origin of freedom; and F. A. Hayek,[53] who was never constrained by disciplinary boundaries.

But unlike scholars who may agree that there is much to be gained by moving closer to or even across disciplinary lines to discover adjacent opportunities, Shiller shows how it is done. His book is loaded with references to and full discussions of topics, events, and findings presented by historians, psychologists, and noted authors. Still, while consilience is a much-appreciated idea that many would aspire to implement, one has to face the fact that not many scholars have the breadth of knowledge and research skills to bring it off successfully. As one of my graduate school professors said to one of my fellow graduate students who, in a critical moment, argued that scholars should take a multidisciplinary approach to the study of public finance, "Yes, I agree with the notion, but to be successful as a multi-disciplinary scholar, you must first gain expertise in at least one discipline."

Perhaps this explains why Shiller's narrative economics treatment of a number of US macroeconomic events is so appealing. After all, as an

economist, he is an expert on the topics discussed. His treatment includes financial panics, the Great Depression, the gold standard and bimetallism, the concern that labor-saving machines will replace many jobs, stock market bubbles, and other large economic concerns. For me, someone born in 1933, Shiller's Great Depression discussion proved most interesting. At the outset, he makes the obvious but perhaps overlooked point that no one knew the Great Depression was occurring until long after it was over. Put another way, people knew that a lot of people were out of work, that factories were closing, that banks were failing, and that the federal government was accelerating a host of new programs, but all this was not at the time called the Great Depression. And of course, there were no national unemployment data and no quarterly GDP growth estimates.

The narrative economics treatment of these hard times focuses on news stories about hardship, on books about how to get ahead (even in hard times), on plays and movies that deromanticized high-level living and conspicuous consumption, and on songs that went viral. Shiller points out the sudden and dramatic decline in the purchases of automobiles and a popular shift toward thrift and away from spending that would continue long after the Great Depression had ended. To add dimensions to his narrative economics notion, Shiller uses data from the Google Ngram Viewer, Proquest News, and newspapers throughout the book. (The Google Ngram Viewer shows the frequency of the occurrence of words and short phrases in Google's library of more than eight million downloaded books, with coverage from 1800 to 2008. Proquest can provide counts of frequency of words and phrases that occur in newspapers and the news media from as early as 1900 to the present time.)

The Ngram graph of the frequency of occurrence of the words "Great Depression" from 1900 to 2008 provided by the author shows the term barely rising in frequency of occurrence from 1900 through 1960. The pace then quickens and reaches a peak around 2000 and remains stable. The Proquest frequency for "Great Depression" follows a similar pattern until around 2008, which marks the start of the Great Recession, and then skyrockets to form a mountaintop around 2010. The data show how a term goes viral and persists, which in turn is associated with a change in behavior across a large population of people. Shiller makes the point that once a story goes viral and becomes embedded in a country's cultural history, then future events that have some resemblance to those that motivated the earlier viral story can generate yet another narrative surge.

I found Shiller's book to be an extraordinarily productive read. Indeed, I am now attempting to use narrative economics in my study of capitalism's stormy history, hoping that I can find a way to shed some light on tribal-like criticisms of our economic system that become embodied in stories generated by economic events. I recommend the book wholeheartedly.

Those who seek reasons to be more optimistic can do no better than to get their hands on a copy of Andrew McAfee's *More from Less: The Surprising Story of How We Learned to Prosper Using Fewer Resources—and What Happens Next*. As he did when coauthoring the well-received 2014 book *The Second Machine Age* with Erick Brynjolfsson, McAfee again creatively builds a strong case for the opening of a new era where the products people produce and consume will require less material and energy in their making. The case he builds is so strong, certainly as he sees it, that he gives new meaning to the expression "peak oil"—

commonly associated with petroleum—which was the year or period when what society knew it had was at its peak; that there would be less ever more after that. On its face, the new meaning is this: the peak years are those in the recent past—for most materials—when the total amount being utilized, not the amount utilized per unit of output, was at its peak. From this era forward, the world will use fewer resources each year than in the peak year. Yes, I know, the sentence you just read seems ridiculous on its face. Yes, you should read the book.

McAfee's 15-chapter book gives useful treatment to the past conventional wisdom regarding scarcity and the notion that to produce more mankind must use up more of the earth and its resources. During this time, as he puts it, "For just about all of human history our prosperity has been tightly coupled to our ability to take resources from the earth. So as we became more numerous and prosperous, we inevitably took more: more minerals, more fossil fuels, more land for crops, more trees, more water, and so on."[54] But now, as he points out, America, with a growing population and GDP, uses less of most resources every year. Taking the reader figuratively by the hand across time, McAfee points out this dematerialization, as he terms it, is not new. Telling the story of 19th-century industrial electrification, the author points out that development of electric motors and all that went with building generators and the grid to move electricity to industrial plants displaced steam power, which was heavier, used more inputs, and required massive amounts of leather belting to transmit power from line shafts to individual machines. Indeed, we learn that before the electric power transformation, leather manufacturing—for belting, not for shoes—was the nation's fifth-largest industry. More came from less early on. Eventually, of course, electricity made it to individual homes, as did running water. And the running water reduces a lot of running to the well—individual wells, which require more digging to make, more work to use, and more carrying to provide households with water for cooking, cleaning, and washing. More from less.

Using other powerful anecdotes, which is a hallmark of his writing, McAfee describes how one major 1918 invention for synthesizing ammonia completely changed production agriculture, so that as one commentator puts it today, "More than three billion men, women, and children . . . owe their existence to two early-twentieth-century German chemists."[55] By synthesizing ammonia instead of having to dig it out of the ground or out of caves where bats deposited their droppings for thousands of years, people were able to produce more with less. But while McAfee provides power stories from economic history regarding a growing prelude to plenty, he slips a bit, in my view, in describing the weak points of the first industrial revolution. He is correct that child labor was prevalent, and few if any people today would celebrate that way of life. But it is important to remember that the idea of childhood itself is a modern one. Until the late 19th century, those who were old enough to walk, sweep, pick, and plow were treated as adults. They, like all other ordinary people, had to work. And when the steam-driven factories opened, entire families went to work. Yes, the picture is not a pretty one by today's standards, but working families put bread on the table, more than they would have had otherwise. To his credit, McAfee also reminds us of how large mammal populations, such as the American bison, were almost wiped from the earth as nations industrialized. During these destructive yet transformative years, the world was slowly but ever so surely

moving to an era when it would get more out of less destruction.

Ultimately data driven in his analysis, McAfee identifies the year 2000 as the point where things reverse. Using US Geological Survey data, he shows how the total amount of copper, steel, nickel, aluminum, and gold used by the US economy (counting production and imports) peaked and headed south.[56] Moving from gross tonnages to specific instances, the author more than mentions products, such as the iPhone, that combine camera, recorder, tablet, and phone in one device. He touches on Lyft, Uber, and other resource-sharing mechanisms and then goes to what some may consider the heart of the matter, which is economist Paul Romer's discovery of endogenous technical change.[57] It is not so much that Romer found the secret for getting more for less, but that he provided a sound economic theory for why this would be the case. Romer's notion of endogenous technical change captures the idea that human beings are constantly tinkering and searching for easier, lower-cost ways to do what has to be done. Everyone with good sense wants an easier life, not a more difficult and onerous one. This applies in spades at the workplace. Mechanics, engineers, managers, and shift workers constantly get ideas for improving the productive process, for getting more from less. Human beings aren't unthinking robots, and they are never working in lockstep, hoping that some smart scientist will make a discovery that will somehow show up on the loading dock of their factory. Technical change can come from outside the factory economy. It can be exogenous, but as Romer argues, most of the time the changes come from within the factory.

Combined with other features of capitalism, constant technical change brings falling costs with greater production. And that means getting more from less.

McAfee closes his book by offering to make a wager with anyone who wishes to take him on. He's putting $100,000 of his own money on the table and asking for bets of $50 or more on the proposition that 10 years from now, in 2029, the United States will be using less metal, less timber, less energy, less paper, less fertilizer, and less industrial material than are being used in 2019. This is less in total, not per capita or per product.[58] His bet requires both parties to agree to give the proceeds to a charity that each will designate.

McAfee's book is a good read!

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NOTES

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