ECONOMIC OUTLOOK

The inflationary economic boom continues. National economic growth in 2021 was the strongest seen since the early 1980s. Total gross domestic product (GDP), or economic output, grew by 10 percent. However the breakdown is 4.4 percent inflation and 5.7 percent real, or inflation-adjusted growth. These strong gains are expected to continue in 2022 due to ongoing business investments and increases in consumer spending. As the economy reaches potential, growth will slow in the years ahead.

Today, households are flush with cash and rising wealth. Consumers have the ability and are showing the willingness to pay higher prices for goods and services. Businesses can pass along production cost increases as a result, maintaining and even increasing profit margins.

The biggest economic challenge today remains the supply side of the economy. It is not that supply chains are broken. Rather, given the strong consumer demand, supply chains are overloaded. The economy is producing, transporting, and selling record volumes. However those records have not been able to keep pace with demand.

Labor runs through everything and is the single biggest constraint holding back real economic growth. Encouragingly, firms are investing in new plants, equipment, and software, which will make existing workers more productive. However, the labor market is tight. While total employment counts are not expected to regain their pre-pandemic levels until later this year, the current labor market dynamics of fast-rising wages as firms compete for existing workers is expected to continue. With migration flows picking up, and more individuals seeking out the higher-paying and more-plentiful job opportunities, labor supply will continue to increase.

Oregon added a record number of jobs last year as workers returned to the labor market. Even so, the labor market is expected to remain tight given the strong demand from firms and ongoing Baby Boomer retirements.

The biggest risk to the outlook remains persistently high inflation. A year ago, much of the inflationary pressures could be tied to reopening the economy and semiconductor shortages in the automobile industry. Since then the inflationary pressures have broadened and remained more persistent than expected. In recent months the Federal Reserve is pivoting hard toward tightening monetary policy faster than previously expected as a result. While not the baseline outlook, the ultimate risk is that the economy runs too hot and the Fed raises rates sharply, creating a boom/bust dynamic in the years ahead instead of engineering the expected soft landing.

Strong Household Finances

To date, households not only have the ability but also the willingness to pay higher prices for goods and services. Between growing current incomes, accumulated savings, rising wealth, and low credit or debt usage, consumers have no shortage of firepower when it comes to spending. This is a key underlying factor in the current inflationary economic boom.

Early in the pandemic, the strong household finances could be tied to direct federal aid – predominantly recovery rebates, and enhanced unemployment insurance benefits – and an initial decline in spending during the shelter-in-place phase of the cycle. Since then federal aid has lapsed but booming labor income has offset the impact for most households. Our office’s outlook for total personal income, including wages and salaries in
the state has never been higher. The current forecast is stronger than pre-pandemic expectations despite the fact that the state remains 54,000 jobs short of pre-pandemic levels as of December 2021.

While consumer spending has returned to pre-pandemic trends overall, these income gains mean overall household savings remain elevated. The accumulated savings earlier in the pandemic has yet to be drawn down in recent months.

Income and wealth are not evenly distributed in Oregon or across the country. There is considerable inequality. By measures like the Gini Index of Income Inequality, Oregon is a bit more equal than most states (ranking 37th highest in 2019) but certainly experiencing the broader trends of rising inequality in recent generations.

For this reason, much of the accumulated savings and overall increase in wealth during the pandemic is concentrated among high-income and high net wealth households. Such households earn more money and thus can more easily have a higher savings rate, as they are not living paycheck to paycheck. Such households are also more likely to own businesses, real estate, and stocks, all of which have increased in value in recent years.

That said, research from both the Federal Reserve¹ and the JPMorgan Chase Institute² show that savings and wealth gains are seen across the entire distribution. It is encouraging that even as inequality remains large, low- and moderate-income households are in stronger financial positions today than before the pandemic.

One final factor for households is that credit usage and overall debt levels remain tame thanks to the rise in incomes and asset values. Many households have been able to pay down their existing balances, including using recovery rebates to do so, and any increases in new debt so far have largely been keeping pace with income growth. While too much household debt is a macroeconomic problem and helped lead to the Great Recession and financial crisis in the late 2000s, households today do have room to lever up without triggering major concerns. A consumer credit cycle, should households choose to take on more debt, could fuel ongoing spending, and therefore inflationary pressures, in the years ahead.

In terms of that spending, the forecast calls for both continued strong sales of physical goods and growth among services. The goods spending is a risk to the outlook, and for manufacturers in particular. Initially when consumers were sheltering in place, they purchased more at the grocery store and less going out to eat, more e-commerce that could be delivered to their doors, more recreation equipment, and the like. As society continues to learn to live with the virus, and the pandemic wanes overall, the risk is that spending on such goods will quickly revert to trend, leaving manufacturers holding too much inventory compared to suddenly weaker sales. That remains a possibility but is not the baseline outlook.

Today, the U.S. economy has a record low inventory to sales ratio. The economy needs a big increase in inventory just to return to pre-pandemic balance. Additionally the ongoing strength in goods is happening when auto sales are down considerably due to the semiconductor shortages in the sector. As more vehicles become available for sale, goods spending should continue to be strong overall.

More importantly, given the strong household finances, consumers do not have to spend less on goods to spend more on services. It is not an either/or situation but a yes/and one if households want.

Today, consumer spending on services is nearly back to pre-pandemic expectations. Only in the past few months have inflation-adjusted sales at restaurants fully returned to trend. Based on regional air traffic data and hotel occupancy rates across Oregon it is clear that leisure travel has returned, but business travel has not. But some of the ongoing weakness in services spending can be tied to restrictions on elective surgeries, and fewer routine dental appointments. Furthermore, as a society we are making fewer trips on public transit, fewer visits to sporting events, amusement parks, and movie theaters, in addition to less frequent appointments at barbershops and nail salons to name a few. All of these activities should pick up this year and next.

Importantly, the continued rebound in spending on services will drive the labor market recovery as well. Services are labor intensive as it takes a lot of man- and womanpower to give care, wait tables, and the like.

**Labor Market is Tight**

Labor runs through everything and is therefore the biggest constraint on the economy today. If firms cannot properly staff their operations, it leads to fewer hours worked and fewer goods and services produced. Today there are a few factors holding back the number of individuals actively looking for work. The primary factor is likely the strong household finances as it means more individuals do not have to work just to put food on the table or pay the bills. When combined with any other factor like the virus itself, or childcare issues including kids quarantining or online learning and the like, overall labor force participation nationwide is lower today than pre-pandemic.

Additionally, strong wage gains for current workers means that a potential second earner in the household does not need to return to work as quickly as before. Similarly, workers who previously had to work multiple jobs in order to make ends meet are more likely to be able to do so with just one job today. While good news overall, such a scenario does have implications for payroll job counts. A worker moving from two jobs to one represents no change in the number of employed Oregonians, but it does represent the loss of one payroll job, as measured in the employer survey, at least if the business does not fill it immediately.
Overall our office’s outlook expects the number of Oregonians seeking work to continue to increase in the years ahead. As the pandemic wanes, and as some of the accumulated household savings is spent, more workers will be drawn back into the labor market in search of the more-plentiful and better-paying job opportunities that are out there. That said, the labor market is expected to remain tight. The combination of strong labor demand from firms looking to hire, and the ongoing Baby Boomer retirements in the decade ahead means the economy will be at or near full employment over the forecast horizon.

When it comes to labor demand, Oregon business are looking to fill 103,000 job openings today based on the latest job vacancy survey from the Oregon Employment Department. This is on par with the record-high number of vacancies reported by local firms over the summer when they were looking to fill 107,000 jobs. What’s interesting to note is that while the vacancies are at historic highs, overall labor demand is essentially just back to where it was before the pandemic hit. The number of filled jobs plus the number of unfilled jobs is not through the roof. Rather, businesses are struggling to get back to their workforce numbers they had just a couple years ago.

Now, labor supply in the state is increasing. Firms are able to hire. Oregon just added more than 100,000 jobs in the past year and 230,000 jobs since the depths of the initial shutdowns at the start of the pandemic. Workers are clearly returning to the labor market, however labor supply has rebounded slower than labor demand, leading to the tight labor market overall.

**Wage Growth**

Increasing wages is one clear way businesses have responded to the tight labor market. In Oregon the average wage is up 17 percent since the start of the pandemic. Initially these wage gains were a statistical mirage. As many lower-paying jobs were lost in bars and restaurants during the initial shutdowns, it meant that the average wage of those who kept their jobs increased strictly due to the composition of the workforce. However, as the economy has added back most of these lost jobs, average wages did not decline. Rather wages per worker have continued to increase at a pace stronger than seen in 2018 and 2019. This is due to the combination of ongoing wage gains for the continuously employed workers, but also very strong wage gains at the lower end of the distribution. This means that as employment in these pandemic-hit sectors increases, the jobs being added back into the average wage calculation are significantly better paying than those that were initially dropped out.

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3 [https://www.qualityinfo.org/documents/10182/90519/Quarterly+Job+Vacancies+Snapshots+%E2%80%93+Fall+2021?version=1.0](https://www.qualityinfo.org/documents/10182/90519/Quarterly+Job+Vacancies+Snapshots+%E2%80%93+Fall+2021?version=1.0)
Looking forward our office expects average wages in Oregon to increase 4.9 percent in 2022 and 4.0-4.1 percent in the years after. These gains are faster than the 3.8 percent increases workers experienced in the years leading up to the pandemic. However those increases happened in a low inflation environment. To the extent inflation does not slow in the second half of this year (see next section for more on the inflation outlook), then wage gains are likely to continue at a faster pace.

One sector that has lagged in wage growth has been public employees. To the extent faster wage growth is collectively bargained in upcoming negotiations due to the latest inflation data, then overall wage gains are also likely to be faster in the years ahead. Similarly if public employers were slower to respond to the tight labor market, then increases in public salaries this year and next are more likely to be above average.

Even so, expectations are that wage growth will cool somewhat over the next 12-18 months. Part of the reason is inflation slowing down some. However another part is that a portion of the very strong wage growth has been from firms enticing workers back into the labor market during the pandemic. Many lower-paying jobs were previously in the $12-13 per hour range but now pay $16-18 per hour. Our office’s forecast does not assume wages for those jobs are going to $20-25 per hour this year. As such, the biggest increases in wages are likely behind us, even as ongoing gains are expected. The risks here are also to the upside, especially to the extent that wage growth accelerates among middle- and high-wage jobs which have not seen as strong of increases during the pandemic.

Factors Impacting Job Vacancies

When it comes to job vacancies there are another two things to keep in mind. First, the pandemic is not over. While widespread macroeconomic impacts are unlikely without shutdowns, we know there are considerably more workers out sick today than a couple years ago. Furthermore, some workers are out as they care for a sick family member or help their kids with online learning as some classrooms and schools went remote for a few days during the omicron wave. Additionally there are about another 24,000 Oregonians who say they are not actively searching for work specifically due to COVID-19. All of these situations are temporary disruptions that will normalize, but represent recent workplace disruptions and unfilled jobs nonetheless.

Second, employees are quitting their jobs at record rates today, leaving job openings in their trail. In the academic literature this process is called a vacancy chain. Now, these workers are not quitting their jobs to drop out of the labor market. Rather they are switching jobs and taking advantage of the opportunities in the labor market.

Ideally when workers find a new job it represents a better labor match overall. This could be in terms of skill set, geographic location, better hours, and higher pay. Given the tight labor market, it is very likely that all of these considerations are coming into play for workers. From a microeconomic viewpoint, a better labor match is an improvement for each worker or household. But this is also true at the macro level as a better labor match can increase productivity as well.

Where Future Labor Supply Will Come From

Simply put, the number of Oregonians actively looking for work will increase through both continued net in-migration, and higher participation rates among existing residents.
Population growth slows during economic recessions as household hunker down. Job opportunities are typically fewer and farther below. However as job opportunities improve in expansions, households move to a greater degree in order to seek them out. The latest population estimates in Oregon show that population growth slowed in 2020 and again in 2021. Our office’s forecast calls for a rebound in migration this year and next. Already the state is seeing a strong increase in the number of surrendered driver licenses at the DMV, which has traditionally been a good leading indicator of migration. Traditionally 50-60 percent of migrants are in the labor force, with most of those who are not being young children or retirees. As such, a rebound in migration will contribute to increases in the pool of available workers for local businesses to hire and expand.

One risk to the outlook would be changes in the relative patterns of migration across the country. At least last year, there was a slowdown in migration among popular western states like Colorado, Oregon, and Washington. Conversely there were stable or accelerating population trends in other western states like Idaho, Montana, and Utah. To the extent shifts like this are more permanent than temporary, it could indicate that Oregon’s population growth may be slower than expected in the years ahead, meaning the local economy would likely see slower growth than the baseline outlook calls for.

The second major way the labor force grows is through higher participation rates among those already living in Oregon. Nationally the labor force participation rate is down 1.5 percentage points, although aging demographics account for 0.6 percentage points of the total. Participation and employment rates are down for essentially all demographics except for teenagers who have been more willing to take and fill those better-paying jobs. That said, among the large prime working-age cohort, employment rates are down the most for those without college degrees.

Beyond looking to rehire those who were previously employed a couple years ago, there remains a considerable pool of untapped workers already living in the state. Our office calls this the Latent Labor Force, as detailed in the September 2021 forecast⁴. This group of potential workers are composed of those who are not employed due to inequities in the economy and/or our society. Included here would be those not working due to gender inequities, racial and ethnic disparities, and educational attainment gaps. Addressing these issues through improved daycare options so moms can participate as much as dads if they so choose, or raising educational

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⁴ [https://digital.osl.state.or.us/islandora/object/osl%3A974986/datastream/OBJ/view](https://digital.osl.state.or.us/islandora/object/osl%3A974986/datastream/OBJ/view)
attainment among today’s youth and the like has the potential to increase the Oregon labor force by considerably more than faster migration ever could.

**Bottom Line:** The labor market is tight. It is harder for businesses to find workers today. However the employment recovery is not yet complete. The state still has 54,000 jobs left to go to regain pre-pandemic employment peaks. Our office expects the local economy to reach this milestone this fall. This represents a slightly slower forecast than the previous outlook which forecasted employment to return to peak by late summer. While the overall labor market recovery is still 2 or 3 times as fast at the recovery from the Great Recession, given the tight labor market, these last 54,000 jobs are going to be harder to fill than the first 231,000 of the recovery.

**Persistent Inflation is a Risk**

Inflation continues to run hot. Initially, much of the overall increase in prices could be tied directly to the reopening of the economy and to semiconductor shortages in the automobile industry. However, inflationary pressures have broadened and become more persistent over the past year. Today, inflation is running at about a 4 percent annualized pace, even after excluding these well-known issues.

The challenge is that all three main factors influencing the overall inflationary outlook – actual inflation, inflation expectations, and household incomes – continue to point toward faster ongoing price increases. The current bout of inflation has led to consumers expecting higher inflation both this year and over the next handful of years. Those medium-term inflation expectations are still anchored, but have drifted higher. And so long as household incomes continue to grow strongly, consumers will have the ability to pay higher prices.

Even so, we know that inflation is not costless. Higher prices will eventually eat into household budgets, resulting in what economists call demand destruction. When prices get too high, people stop buying or at least stop buying as much. This feeds back into the production side of the economy. If sales slow, then firms do not need to produce as much, or employ as many workers. The ultimate result is slower real growth even if topline revenues are increasing due to prices.

This process can be seen in the consumer spending data from 1970s when inflation was high for most of the decade. The chart of the left shows that overall consumers continued to spend. Households needed to pay rent,
buy gas, put food on the table and the like. They also continued to go out to eat and on vacations as well. However, as seen in the inflation-adjusted chart on the right, there was a clear consumer response to relative price changes across categories. The sectors with fewer price pressures, saw the largest underlying demand increases (inflation-adjusted sales). Conversely, the categories that saw the most price pressures did see overall revenues rise but no underlying increase in demand.

A second way that inflation is not costless is that prices eat into the strong wage gains workers are experiencing. While the average wage in Oregon is up 17 percent since the start of the pandemic, the real, or inflation-adjusted average wage is up 8 percent. Clearly those are still solid gains over the entire period, however inflation is beginning to impact real wages in recent quarters. Inflation-adjusted wages are declining for most workers in the past 6-12 months. Overall, real wage gains are not expected to pick up until late this year as inflationary pressures subside some.

As a result of these overall dynamics, the Federal Reserve is pivoting to tightening policy more quickly than they had been anticipating. The Fed is currently communicating that they will end their asset purchases and begin raising interest rates in March. The Fed expects 3-4 rate hikes this year, while financial markets are pricing in 5 rate increases in 2022. At his January press conference, Fed Chairman Jerome Powell mentioned that in order to support continued gains in the labor market, the economy needed a long expansion, which requires price stability. The Fed will raise rates faster this cycle than last given the overall economic and inflation dynamics, with the goal to ensure that higher inflation does not become entrenched in the economy.

There are at least four potential saving graces to the high inflation seen today. First, an increase in production or a more likely slowing of consumer demand in the goods sectors would alleviate supply chain pressures and slow inflation. The risk here would be whether or not service inflation accelerates at the same time. Second, that the Fed’s actions cool the economy enough to slow inflation and engineer a soft landing. The risk here is whether the blunt instrument that is monetary policy can thread the needle and not send the economy back into recession.

The third and fourth reasons are tied to productivity. Chair Powell noted at the same January press conference that “persistent real wage growth in excess of productivity could put upward pressure on inflation.” So to the extent that productivity increases, then the strong wage gains seen in today’s economy need not be inflationary. Specifically the third potential saving grace is that there has been a big increase in business investment this cycle, and in orders of capital goods, which can make existing workers more productive. The fourth reason is the large increase in new business formation. New firms are usually best able to bring new products, services, and efficiencies to the market. While the process of creative destruction may result in a few more business closures along the way, it does represent an overall increase in productivity and economic activity.

There are a few main channels in which higher interest rates impact the economy and help cool inflation. By increasing the cost of capital or financing, businesses and households do tend to spend less on the margin. This helps dampen demand and keep price pressures at bay. Key sectors that are usually most impacted by higher interest rates are autos and homes. Given these are two of the most supply-constrained industries today in which consumers really do want to buy more, it may take some time and noticeably higher interest rates to cool demand here. Other impacts of higher rates can usually be seen in credit card usage for households as interest costs on their balances increase, and similarly for business borrowing where firms will slow their loan activity
when it is more costly to expand. Finally, as higher rates slow consumer spending and business activity a bit it can weigh on equity markets as well, dampening the wealth effect.

The ultimate economic risk is that tightening policy too quickly cools the economy too much leading to a boom/bust cycle (see the Alternative Scenarios on page 14 for more). For now the baseline outlook remains that the Fed is able to engineer a soft landing. The current inflationary boom turns into an ongoing economic expansion with inflation moderating towards the Fed’s 2 percent target over the course of this year and next.

**Industry and Regional Outlook**

**Industry Outlook**

While Oregon has regained 4 out of every 5 lost jobs at the start of the pandemic, the recovery is not yet complete. Given the industry variation to date, the outlook is a combination of underlying growth in the economy and also some rebound associated with recovering from the pandemic. As such, expected industry growth in the coming years can vary widely depending upon where each sector is along this path.

To start, leisure and hospitality is still 12 percent below pre-pandemic peaks as of December 2021. On an annual average basis, 2021 employment in the industry was a whopping 24 percent below 2019 levels. As such, the strong growth expected in the forecast is really just the industry staffing back up to accommodate household demand for going out to eat and on vacation. Our office has the industry reaching all-time historic highs for employment in the years ahead. However, on a population-adjusted basis the industry never regains its peaks due to some structural changes in staffing when it comes to not cleaning hotel rooms every day, more counter or kiosk service and less staffing for sit down dining and the like.

Professional and business services are expected to grow the second fastest in the years ahead. Much of these gains are tied to the ongoing growth in office-based or at least office-type jobs in the economy, as more workers are likely to work from home a bit more frequently.

Education – both private and local government – are expected to see strong gains in the near-term as school-related employment remains below pre-pandemic peaks. Part of this is likely due to struggles school districts have in terms of filling both non-teaching positions like bus drivers, nutrition workers, and the like, but also substitute teachers. Similarly, college enrollments, particularly among community colleges, are down during the pandemic, meaning higher education requires fewer workers today. Looking forward, the expectations are employment will rebound, along with improving enrollment figures. However with stable to slightly declining demographics for both K-12 and college-age populations, the long-term outlook similarly calls for stable to slightly declining employment in education in the decade ahead.

Transportation, warehousing, and utilities have been booming with the continued rise of e-commerce and big increase in goods spending during the pandemic. There have been multiple announcements of future
distribution centers, primarily in the Portland region that are built into the outlook. Industrial and warehousing vacancy rates are very low, and new construction should bring more capacity and future growth online.

Health care and social services employment is currently 4 percent below pre-pandemic peaks, but expected to see above-average growth in the years ahead. Underlying demographic drivers of a growing, and aging population will result in increased demand for workers. See our office’s report on the trends and expectations for the different subsectors within health care and social assistance.

At the other end of the industry spectrum are sectors like construction and retail. Both have made a full recovery from the pandemic and face constraints moving forward. For example, long-term trends in brick and mortar retail are not kind. However with a growing population, our office expects retail to grow as well, just not nearly as fast as incomes or population alone would suggest.

**Construction, Housing Supply, and Affordability**

Demand for housing is very strong. Vacancy rates are falling, home sales are rising, and while new construction activity is increasing a bit, but in the big picture it is relatively steady.

The lack of a sustained supply response in housing in the past 20 years is problematic for both current residents, and longer-term economic and revenue growth.

Oregon has underbuilt housing by 111,000 units in recent decades. Unfortunately the industry is running into supply side constraints. In general these include the lack of financing, particularly for land acquisition, development, and construction loans, which contributes to the low supply of available land and buildable lots. Layered on top of those are local land use, zoning and parking requirements, permitting processes and design reviews, and the like which are generally well-intentioned, but can reduce the timeliness and number of units being built. Furthermore labor is tight, particularly for an industry that has seen zero productivity increases in recent generations.

All of these issues exist, and then the pandemic hit which simultaneously boosted homeownership demand and disrupted supply chains. Material and product availability is challenging, with longer lead times and more slowdowns in new housing production.

A market where demand is strong due mostly to rising incomes and favorable demographics, but supply is weak, is one in which prices can increase quite quickly. And when the market becomes a bidding war, as it does in a supply constrained environment, it is our lowest income neighbors and family that lose out.

The statistics on the struggles of low-income households are myriad, and staggering. In Oregon, about one in four rental households spend more than 50 percent of their income on rent. There are twice as many very low-income rental households in Oregon (<$22,000 in income) than there are rental units that are affordable to those households (<$600

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5 [https://oregoneconomicanalysis.com/2022/02/03/oregon-health-care-employment/](https://oregoneconomicanalysis.com/2022/02/03/oregon-health-care-employment/)
8 [https://www.bls.gov/lpc/construction.htm](https://www.bls.gov/lpc/construction.htm)
per month) without subsidies. And only about one in four eligible households actually receive federal rental assistance. As a result, estimates are that half of the state’s underproduction of housing – 54,000 of the 111,000 units – is needed among those earning less than half the area median income (AMI), or about $40,000 per year.

The issue is worse housing affordability forces families to make difficult, and at times impossible trade-offs. This includes other basic needs like food, clothing, transportation, and health care. Affordability problems are also the root cause of homelessness. New market rate construction is necessary and provides a lot of benefits, but it does not solve low-income affordability problems in the near-term. As such, continued investment in Affordable housing is needed. New Affordable projects are expensive – two recent projects in the Portland region are approximately $400,000 per unit – and require substantial public funds either from the public sector directly or voter-approved bonds. Even so, it is clear that every single unit counts.

But those investments and improvements in low-income affordability cannot be achieved in a vacuum either. New market rate construction is required. Not only does new construction meet the demand of mostly high-income households, meaning they are not competing with low- and middle-income households for the same units, it also contributes to longer-term affordability through filtering. Older units are generally less expensive in part due to being used, with a little more wear and tear, less up to date and broader societal changes in tastes and preferences. Consumers are willing to pay a premium for new, and/or updated homes.

Today’s tight housing market is in part a function of the lack of new construction in the 1980s and in the aftermath of the Great Recession this past decade. There are fewer units to go around as a result. However, filtering does happen but is a longer-run process. Even so, if you build more units, you get more filtering. For example there are more housing units that are in the most affordable third of the market built in the 1990s than were built in the 1980s, despite being 10 years newer. This is due to the fact Oregon built nearly 100,000 more units in the 1990s than in the 1980s. Again, if you build more units, you get more filtering. What this also means is that given Oregon built so few units in the past decade, it will unfortunately have a lasting impact on availability and affordability for decades to come.

Our office’s forecast in the decade ahead is for 220,000 new housing starts, which are closely tied to the population and demographic forecast. This outlook does not make up the existing shortfall. The primary reasons are all of the supply side constraints discussed earlier, and the simple fact that Oregon has not built enough units in recent decades so it is hard to assume we suddenly will tomorrow.

Now, public policies like duplex legalization (HB 2001, 2019) and regional housing needs analysis (HB 2003, 2019) do support an increase in housing supply. These changes should provide economic, environmental, and societal benefits in the decades ahead. These benefits include better affordability, improved economic mobility, more walkable neighborhoods, and more efficient use of infrastructure to name a few. However these policies are best thought of as long-term improvements and are not a silver bullet to the immediate supply issues. Rather, it will likely take a concerted
policy and workforce effort to increase the authorization and actual construction of more units than in our office’s baseline outlook.

Ultimately, housing affordability is a longer-term economic and revenue risk. Our office’s forecast assumes that households will continue to move to Oregon in search of the high quality of life and plentiful job opportunities. However to the extent fewer households can afford to live in and move to Oregon, or choose to live in a relatively more affordable state like those in the Intermountain West, then our office’s longer-run outlook will need to be revised lower. A slower growing population means there are relatively fewer workers earning less total income than in the baseline forecast. This translates directly into fewer customers and sales for local firms, and less taxes paid to state and local governments.

**High-Tech Manufacturing Outlook**

Computer and electronic product manufacturing is the long-time pillar of the state’s high-tech industry. Overall the sector outlook is solid to good. Demand for automobiles, computers, and servers all support product and revenue growth in the years ahead. That said, two issues arise. One old, one new.

First, increasing productivity in the sector has not translated into more employment in recent decades. Big, local investments every 5-10 years help each new generation of chips and maintain the status quo from a workforce perspective. And to the extent some firms within the industry are growing, there are other, generally older ones that are declining. This remains the baseline outlook for the industry in Oregon.

Second, for the first time in decades, the industry appears to be set for growth nationally with big recent announcements of investments and even new fabs in Arizona, New York, Texas, and most recently Ohio. While Oregon is expected to continue to see investments and the main hub for research and design work, the state appears to have missed out on these opportunities.

From a local and national perspective, Oregon has a significant, and vital cluster when it comes to high-tech manufacturing. The share of local jobs in the industry is nearly three times the national average, while the share of state GDP is more than four times the national average. In raw terms, Oregon ranks 7th highest among all states of industry employment and 4th highest for industry output.

While it is beyond the scope of this forecast, two key questions are how significant are these missed opportunities, and why has Oregon appeared to miss out on them?
On the second part there seems to be a confluence of factors ranging from available industrial land, to tax incentives, to workforce, to partnering with local universities, and to housing affordability.

On the first part, it is yet to be seen exactly how these announcements translate into actual economic activity. A key consideration is what is the nature of these facilities a handful of years down the road? Are they production plants or do they also have significant engineering and R&D components as well?

Today, one distinction between the states is that the Arizonas, Idaho’s, and Oregon’s of the industry have both significant production and engineering jobs to say nothing of higher level management and office-based work. Conversely the New Mexicos and Ohio’s, at least today, tend to be more production oriented. While a missed opportunity is a missed opportunity, the ultimate nature of these facilities and longer-run growth paths will determine the exact costs.

**Regional Outlook**

So far during the pandemic there is considerable variation among Oregon’s regional economies. Central Oregon’s employment is at an all-time high, Northeastern Oregon is nearly fully recovered, while the Portland region trails the rest of the state. These patterns are in part due to regional income and population trends, and in part due to the industrial structure of each region.

While a detailed local forecast is beyond the scope of our office, we can take a look at how the local industrial structure is set up for success based on the broader trends built into our statewide forecast.

In the nearby bubble chart, each major regional economy within the state is shown. On the vertical, y-axis is current employment relative to pre-pandemic peaks. On the horizontal, x-axis is a comparison of expected future growth based on the local industrial structure. The calculation is such that if the regional value is greater than 1.0 then the region has a larger share of local jobs in the sectors that are expected to perform well. Conversely if the value is less than 1.0 then the region has a larger share of jobs in industries that are expected to grow slower in the years ahead.

The North Coast’s industrial structure leads the pack almost entirely due to its reliance on Leisure and Hospitality. Even as consumer demand has rebounded, particularly outside of the Portland area, there remains a long way to go in terms of employment. Leisure and Hospitality on the Coast is still 9 percent below pre-pandemic levels, which is better than the 12 percent statewide hole, but clearly not yet complete. The North Coast industrial structure is also pretty typical in terms of Health Care, and Government which should see average gains. Retail is the only sector the North Coast is overweight in that will see slower growth.

Portland’s regional economy is home to the state’s largest concentration of Professional and Business Services, and above average shares in Wholesale, and Transportation, Warehousing, and Utilities. All are expected to grow more rapidly than their regional counterparts.

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[9](https://oregoneconomicanalysis.com/2021/12/07/whats-wrong-with-portland/)
grow strongly in the years ahead. The region is also pretty typical for Health Care, and Leisure and Hospitality, two other fast-growing industries.

Central Oregon is home to a pretty diversified industrial structure\(^\text{10}\) with larger concentrations in a Leisure and Hospitality, Information (data centers), Retail, and Construction. In a fast-growing region the larger Construction share is likely to be more of a boost than the slower statewide forecast would indicate. The region also has average concentrations in Health Care, Professional and Business Services, and Government which should all see solid gains.

On the other end of the industrial structure spectrum stands Northeastern Oregon. The region has a larger reliance on Natural Resource (agriculture) and Manufacturing, both of which are likely to see slower growth in the years ahead. These concentrations have been historical strengths for the region and need not necessarily weigh on the economy. When commodity prices (wheat) are high, the regional economy fares better, for example.

Most other regions of the state are expected to see average to slightly below average growth based on their industrial structure alone. Of course mapping local industrial structures to statewide trends is not perfect, even if it provides one way to gauge potential strengths and weaknesses. What really matters for longer-run economic growth is the number of workers a regional economy has and how productive each worker is. Key issues to watch are migration trends and changes in the working-age population. Additionally, productivity gains can come from many different types of capital, such as financial, natural, physical, human, and/or social\(^\text{11}\). If a regional economy lacks one source of capital, it is not a deathblow to overall growth. Rather, it signals the area must rely on other types for growth.

**Alternative Scenarios**

The baseline forecast is our outlook of the most likely path for the Oregon economy. As with any forecast, however, many other scenarios are possible. Given the current economic dynamics and potential for inflation to run hotter, for longer, our office’s standard optimistic and pessimistic scenarios are again excluded this forecast in lieu of a boom/bust scenario.

### Alternative Scenario

<table>
<thead>
<tr>
<th>Oregon Employment Alternative Scenarios</th>
<th>Percent Change from Pre-Recession Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>0%</td>
</tr>
<tr>
<td>Boom/Bust</td>
<td>5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>2.4%</td>
<td>3.6%</td>
<td>2.3%</td>
<td>1.2%</td>
<td>0.8%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Boom/Bust</td>
<td>2.4%</td>
<td>4.8%</td>
<td>0.2%</td>
<td>-2.6%</td>
<td>-0.8%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unemployment Rate</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>5.3%</td>
<td>3.7%</td>
<td>3.6%</td>
<td>3.8%</td>
<td>4.0%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Boom/Bust</td>
<td>5.3%</td>
<td>2.7%</td>
<td>5.1%</td>
<td>8.1%</td>
<td>8.6%</td>
<td>7.6%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Personal Income</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>7.8%</td>
<td>2.0%</td>
<td>5.8%</td>
<td>5.3%</td>
<td>5.2%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Boom/Bust</td>
<td>7.8%</td>
<td>3.5%</td>
<td>3.4%</td>
<td>1.2%</td>
<td>5.7%</td>
<td>7.0%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Consumer Spending</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>12.2%</td>
<td>7.3%</td>
<td>4.2%</td>
<td>4.7%</td>
<td>5.0%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Boom/Bust</td>
<td>12.2%</td>
<td>9.9%</td>
<td>-0.7%</td>
<td>1.4%</td>
<td>7.4%</td>
<td>7.8%</td>
</tr>
</tbody>
</table>

\(^{10}\) https://oregoneconomicanalysis.com/2019/03/13/regional-business-cycle-exposure-pt-2/

\(^{11}\) https://oregoneconomicanalysis.com/2019/10/30/big-question-2-capital-and-long-run-growth/
**Boom/Bust Scenario:**

The inflationary boom continues. By the middle of 2022, employment, income, and spending are all 2-3 percentage points higher than the baseline. Corporate profits and the stock market are even higher. The unemployment rate drops to below 3 percent by late summer or early fall this year. Inflation cools from today’s highs but remains closer to 5 percent. The Federal Reserve raises interest rates faster and more often as a result. The policy goal is to cool the economy and bring inflation under control. However the end result of rising interest rates is to send the economy back into recession beginning in 2023. All told, Oregon loses 100,000 jobs and the unemployment rises to nearly 9 percent due to the relatively long-lasting recession. Growth resumes in early 2025 and the recovery is strong compared to the aftermath of either the dotcom bust or Great Recession. Oregon’s economy regains full employment in 2028.

**Longer-Term Forecast Risks**

The economic and revenue forecast is never certain. Our office will continue to monitor and recognize the potential impacts of risk factors on the Oregon economy. Although far from comprehensive, we have identified several major risks now facing the Oregon economy in the list below:

- **U.S. Economy.** While Oregon is more volatile than the nation overall, the state has never missed a U.S. recession or a U.S. expansion. In fact, Oregon’s business cycle is perfectly aligned with the nation’s when measuring peak and trough dates for total nonfarm employment.

- **Housing Affordability.** New housing supply has not kept pace with demand in either the ownership or rental markets. Oregon has underbuilt housing by 111,000 units in recent decades. To the extent home prices and rents rise significantly faster than incomes, it is a clear risk to the outlook. Worse housing affordability hurts Oregonians as they need to devote a larger share of their household budget to the basic necessities. Furthermore, while not the baseline outlook, worse affordability may dampen future growth as fewer people can afford to live here, lowering net in-migration, and the size of the labor force.

- **Global Spillovers.** The international list of risks seems to change by the day. Right now the risks of war in both Eastern Europe and in Southeast Asia are uncomfortably high. Longer-term concerns regarding commodity price spikes in Emerging Markets, or the strength of the Chinese economy – the top destination for Oregon exports – are top of mind.

- **Federal Fiscal Policy.** Changes in national spending impact regional economies. In terms of federal revenues, spending, and employment Oregon is generally in the middle of the pack across states. Oregon does see larger impacts related to forest policies, including direct federal employment. Oregon ranks below average in terms of military-dependent industries and lacks a substantial military presence within the state. Today a potential impact on the outlook would be an increase in federal investment related to the Build Back Better bill, or some future variation. BBB is not build into the current outlook.

- **Climate and Natural Disasters.** While the severity, duration, and timing of catastrophic events like earthquakes, wildfires, and droughts are difficult to predict, we know they impact regional economies. Fires damage forests with long-term impacts, and short-term disrupt tourism. Droughts impact our agricultural sector and rural economies to a greater degree. Whenever Cascadia, the big earthquake, hits, we know our economy and infrastructure will be crippled. Some economic modeling suggests that

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Cascadia’s impact on Oregon will be similar to Hurricane Katrina’s on New Orleans. Longer-term issues like the potential impact of climate change on migration patterns are hard to predict and generally thought to be outside our office’s forecast horizon. Even so, it is a reasonable expectation that migration flows remain strong as the rest of the country becomes less habitable over time.

- **Initiatives, Referendums, and Referrals.** Generally, the ballot box and legislative changes bring a number of unknowns that could have sweeping impacts on the Oregon economic and revenue picture.