Hi. Welcome to economics. This is Kate. This tutorial is on the key lagging indicators. As always, my key terms are in red, and my examples are in green.

So in this tutorial, we'll talk about how economists use data to study the economy, and I'll define and give examples to you of the lagging indicators. So here's a business cycle. And this shows that it's really normal for our economy to go through periods of growth and contraction, and you can see that here. When output or GDP is growing, that's our economy expanding. We reach a peak, and then our economy contracts for a period of time, where GDP or output shrinks or contracts with the trough, and then the cycle repeats itself.

Most people are concerned about things like the unemployment rate and inflation throughout the business cycle. And, actually, we will be talking about both of those. But economists have a lot of different kinds of data to help them do a few things. First, some kinds of data help them to predict where the economy is headed. Other kinds of data help them to explain what has just occurred. And finally, there are data that help them look at what is currently happening in the economy right now. For this tutorial, we're talking about what has just occurred.

So economists use economic indicators, which give them an overall view of the economy at any given point in time. And the three categories are leading, lagging, and coincident. And as I suggested, we are talking about the lagging indicators right now. So, lagging indicators are trends, patterns, or situations that provide a clear indication of where the economy has been. We're taking a look back at where we've been. The lagging indicators I'll talk about are the unemployment rate, the CPI, or Consumer Price Index, and consumer credit.

Let's start with the unemployment rate. So our unemployment rate is measured by our BLS, or Bureau of Labor Statistics. And it would be impossible for our BLS to know every single person in this situation, because, first of all, not everyone files for unemployment. So the government conducts a monthly sample survey. And it's a sample survey because if we wanted to try to interview every single person in our country, as we do every 10 years with the census, that would just take so many resources and way too much time to be-- it just would not be a feasible task to accomplish. So the Current Population Survey, or CPS, is what the BLS conducts. And this survey includes about 60,000 households, which turns out to be approximately 110,000 individuals. And the survey is supposed to be representative of the entire US population. So that means that they will be sampling households all over our country-- in various cities, rural populations, more urban settings, different demographics, obviously, of people, as well.

And the interviewers are going to ask the household members about their labor force activities in that month, and then people will be classified in one of three ways. First of all, people have jobs. That's a pretty easy one. They're employed. Unemployment, though, isn't necessarily as straightforward as people who just don't have jobs. Clearly

to be unemployed, it is people who do not have jobs. But there are two other conditions that have to be met here. They have to be looking for work and available for work. So they will have to want a job, and they have to have demonstrated that they are currently actively seeking employment-- so, for example, maybe they filled out some applications, they've gone on a job interview, they've looked up something online to find a job. Something like that that's demonstrated that they are actively seeking employment. We have a large segment of our population that will never be in the labor force and so not in the labor force are people who are not in either of these situations. They're neither employed nor unemployed. And that would be, for example, anyone who's under 16, anyone who is retired, or stay-at-home parents.

So why is it that unemployment is a lagging indicator? Let's talk about how it can be related to cyclical unemployment for a minute. Remember, cyclical unemployment is the type of unemployment that results during recessions, when our economy is in a downturn. So whenever there is an increasing demand for their good or service all of a sudden, and that suggests that we are in an expansionary period, businesses are then going to respond to that upturn in the economy. They'll notice the increasing demand for their good or service, and now is when they're going to hire more workers and produce more. This is when our unemployment rate will fall. But the opposite situation is when all of a sudden they notice a decrease in demand for their good or service, so we're entering a period of contraction. And then they respond by laying off workers and producing less. And now our unemployment rate will rise.

If we look at structural unemployment, structural unemployment, remember, is due to the changing structure of our economy. So, for example, businesses might be responding to new production techniques available in their industry, new technologies, and they're adopting maybe more efficient methods of production. That might involve laying off workers, because either their workers don't have the skills anymore that are required for the new methods, or technology is simply replacing some of the workers.

So here's just a chart that shows our unemployment rate over the last several decades. And you can see the areas in gray are recessions. And you can note that during those recessions, obviously the unemployment rate is, in fact, on the rise. OK. So even though the unemployment rate is going to be really studied in macroeconomics, because it involves what's going on in the overall economy, microeconomics might also study its impact. So a microeconomist might be interested in how it's impacting certain industries-- maybe, again, because of that structural unemployment, things changing in different industries. Or, a microeconomist might be studying how it's going to impact specific groups of individuals.

OK. Now we have the Consumer Price Index. The Bureau of Labor Statistics also measures the rate of inflation in our economy. And inflation is, quite simply, an increase in the overall price level. So this happens not just when the price of one thing goes up, but when many prices increase simultaneously. And what economists do is they

use price indexes, which are measurements that show how the average price of a standard group of goods changes over time. And the most common is the CPI, or Consumer Price Index. So, again, it wouldn't be feasible for them to quickly measure the price of absolutely every single good and service in our economy. So they use something called-- what we call a market basket, which is a bundle of goods that's meant to represent a market basket purchased monthly by the typical urban consumer. So what do most people need to purchase on a monthly basis? And you can see here I just made up a list of the categories, like food and drink, housing, apparel and upkeep, transportation, et cetera. And then examples of very common items that most people would need to pay for in a given month. So those are the things that they're going to measure in the index.

So, again, why is this a lagging indicator? Well, it's going to take some time for prices to adjust to conditions in the economy. So businesses see a drop-off in demand for their products. They eventually will lower their prices in order to try to sell more. As businesses see an increase in demand, they will eventually raise prices, because they realize that they can and people will still buy it. Again, the CPI measures price changes overall in the economy, so that's very much macroeconomics, but a microeconomist might study the impact in certain industries. So, for example, did the automobile industry experience the same inflation rate as other goods this year? And then the impact for certain types of consumers-- did the price of luxury goods, for example, change more or less than other goods?

Finally, we have consumer credit. And it's the Federal Reserve that publishes a monthly report on consumer credit. What they do is they survey banks, finance companies, credit unions, anyone who is issuing consumer credit. And this is going to estimate changes in the amount of loans that consumers have out. It's also going to look at interest rates for different types of loans-- for example, car loans, credit cards and bank loans, any kind of consumer loan.

So, again, why would this be lagging? Well, people are going to borrow money to make big purchases. So we're not talking about going grocery shopping, here. It's going to take some time to impact people's behaviors. With these big purchases, you don't go out and buy a house overnight because the economy improved. It just is going to be a lagging, or take some time, kind of situation. The borrowing might actually show the largest increases when the economy's already coming out of recession, rather than during the worst of it. And so, microeconomists might be interested in studying consumer credit in specific industries, again, instead of overall-- like in automobile loans, home equity loans, maybe furniture purchases, or other kinds of personal debt. You could take a look at this graph that I found that shows, for example, the different interest rates over time in the car industry. You can see the relationship there.

OK. So you can take a look at what we studied in this tutorial, which are the different kinds of data that economists

use. And the lagging indicators we talked about were the unemployment rate, the CPI, and consumer credit.

Thank you so much for listening. Have a great day.