Transcript of IMF podcast:

Carlo Pizzinelli on How Consumers Chart Inflation

Bruce Edwards:

So consumers around the world are feeling the bite of rising prices, but those consumers themselves play a key role in charting the future of inflation.

Carlo Pizzinelli:

That's basically what people do in their everyday life without thinking about it. But it's hugely important for economists and it ultimately affects the economy as a whole.

Bruce Edwards:

Today we hear about a study that reveals a surprising divide between what experts think and consumers believe drive some pretty important economic trends.

Carlo Pizzinelli:

And in particular, while experts thought that an increase in interest rates would decrease inflation, households mostly thought that an increase in interest rates would actually lead to a rise in inflation.

My name is Carlo Pizzinelli and I'm an economist at the Research Department of the IMF.

Bruce Edwards:

Carlo Pizzinelli is also the author of an article in Finance & Development about how consumers think about inflation. It's based on his research with Peter Andre of the Briq Institute, Christopher Roth of the University of Cologne, and Johannes Wohlfart of the University of Copenhagen. Journalist Rhoda Metcalfe sat down with Carlo to learn more about his study and the deeper workings of the collective consumer mind.

Rhoda Metcalfe:

In recent years governments have begun following very closely consumer expectations for the economy, especially around inflation. And in your recent F&D article, you talk about how inflation can be a self-fulfilling prophecy if people expect inflation. Can you explain that?

Carlo Pizzinelli:

Yes. So to give you an example, imagine that households expect prices to rise between now and next year. That means that some items that they might want to purchase might be more expensive next year, and hence they would rather purchase those items today. That means that the higher demand for those items will increase their prices, and hence, inflation will in fact rise based on the expectations of its increase between now and the future.

Rhoda Metcalfe:

So basically the fact that you think the prices are going to go up, makes the prices go up.

Carlo Pizzinelli:

Exactly.

Rhoda Metcalfe:

Right, and though that obviously is important in terms of policymakers because they don't necessarily want the consumers to be pushing inflation to get higher.

Carlo Pizzinelli:

Yes, exactly. And even more importantly, understanding how those expectations are formed is helpful for policymakers if they want to use communication or other tools to steer those expectations, and make sure that the policy actions have the intended effects.

Rhoda Metcalfe:

Right. So I mean this area of study of trying to understand what people's expectations for the future are in terms of the economy, is this something that people have been studying for a long time?

Carlo Pizzinelli:

Yes. It's a fairly established field within behavioral economics, and over time there are a number of empirical facts that have been established. So for instance, we now know that in general households tend to expect the future inflation to be higher than what it eventually turns out to be. Meaning that, households tend to over-predict inflation over the one-year or two-year ahead horizon. And often households also misperceive current inflation, and they think that it's higher than what it usually is. Households also tend to have pretty fixed views about inflation, meaning that they don't update their views and their expectations as often as experts who do that as a job.

Rhoda Metcalfe:

I was wondering also, I mean when people have gone through major shocks in their life, like say coming out of wars, out of World War II for example when there were periods of rationing, I can only imagine that a really difficult experience that could mold a population's expectations for many years.

Carlo Pizzinelli:

Yes, that's right. And there are some studies that, for instance, look at the impact of the OPEC oil crisis in the '70s. And in particular, often households extrapolate the broader increase in the prices of all consumer goods from the specific price of one good that they're familiar with, like gasoline and coffee. For instance, in the 1970s oil prices were rising fast due to the OPEC embargoes. And even today it seems that people who experienced those fast increases in oil prices, even today- they tend to be more susceptible to the price of gasoline when they make a connection between how the price of one item, which is gasoline, goes up and how the price of oil items might be going up.

Rhoda Metcalfe:

So when they see the oil prices going up, they're expecting everything to go up. They're expecting inflation to really rise across the board.

Carlo Pizzinelli:

Exactly. And that's a broader finding in behavioral economics, that some experiences that people have lived through in their formative years, so when they were young, tend to stick with them and tend to shape the way they form expectations or some of their values for the rest of their lives.

Rhoda Metcalfe:

I know that you've been working with a group of economists in Europe, right, who've tried to drill down even deeper into households' economic beliefs. So what did the study find? Is there anything surprising?

Carlo Pizzinelli:

Yes. So in a recent study that I coauthored with Peter Andre from the Briq Institute, Chris Roth from the University of Cologne, and Johannes Wohlfart from the University of Copenhagen, we asked the question, "How do non-expert and regular people think about the way the economy works, and how do they factor in new information about a given macroeconomic shock?" The main idea behind the study is the following.

If we provide people with the same information about the current state of the economy and about a given macroeconomic shock that is going to affect the economy over the next year, then from the way their expectations change, we can understand how they factor that information in, and how they think that shock will propagate through the economy. Hence, we can uncover what we call their "subjective model" of how the economy works.

Rhoda Metcalfe:

Right. So you want to understand better why they have these expectations and not just what the expectations are.

Carlo Pizzinelli:

Exactly, but also we want to see how that expectation changes when we give them new information. So we basically, over a three-year horizon between 2019 and 2021, we ran a survey of about 6,000 households in the US that are representative of the US population. To each household, first, we gave them information about the current state of the economy, so what is the current unemployment rate, what is the current inflation rate- and we asked them for a baseline prediction of what inflation and unemployment were going to be over the next 12 months.

Then we gave them information about a hypothetical scenario in which a certain macroeconomic shock, like a change in the Federal Reserve Bank's interest rate, or an increase in government spending, a rise in taxes, or an increase in the oil prices. Then we asked them again what their new expectation for unemployment or inflation was going to be. Then for comparison, we also asked the same question to about a thousand experts.

The findings were surprising because we found that for some of these shocks, so in particular, for the interest rate shock, experts and households had very different views. And in particular, while experts thought that an increase in interest rates would decrease inflation, which is the consensus in economic theory and in empirical evidence, households mostly thought that an increase in interest rates would actually lead to a rise in inflation.

Rhoda Metcalfe:

Which is contrary to what the theories are.

Carlo Pizzinelli:

Yes, so we then developed a second wave of surveys where we tried to dig deeper into this. In particular, we asked the households what they had in mind when they were making those predictions.

Rhoda Metcalfe:

So I mean was there logic to their thinking?

Carlo Pizzinelli:

Absolutely. But what we found is that households predominantly thought about channels that were different from the channels that experts mostly thought about. In particular, while experts often thought about what we can call demand-side channels, which is how monetary policy would affect households' decisions about saving and consumption, the general population most often thought about this supply-side channel that affects businesses, in which if businesses want to invest and spend more on capital, they might want to take out a loan from the banks. So if interest rates rise, their cost for repaying these loans would increase and firms would ultimately pass on this cost to consumers by increasing prices.

Rhoda Metcalfe:

So I mean it's kind of an interesting idea because you think when the central banks decide to increase interest rates, they think that the outcome is going to be a drop in inflation. But if the consumers have a different idea, it may not lead to the drop in inflation that the central bank is hoping for. Right?

Carlo Pizzinelli:

Yes. So that does pose a sort of conundrum because part of the role of a policy move by central banks is also to affect expectations. However, we can also see that if policymakers were to use a communication that tries to steer that expectation the right way, then that inconsistency might be somewhat mitigated.

In the final part of our study that's exactly what we tried to look at, where we run a small experiment in which some of the respondents are prompted to think more about the impact that monetary policy has on households' decisions to consume and save before they have to make their prediction for unemployment and inflation.

We see that among these respondents that have been prompted to think about the impact of monetary policy on households there is a higher fraction of them that make an ultimate prediction for inflation that is in line with the prediction of experts that inflation would fall in response to a tightening of monetary policy.

Rhoda Metcalfe:

So in other words, if people are given better information they're more likely to come to the conclusions that the experts come to.

Carlo Pizzinelli:

Exactly, and that information perhaps shouldn't be just about the ultimate effect of the policy, but also about the channels through which the policy affects the economy. Obviously, our study is very preliminary, but there's also a chance that the best communication is more targeted to different groups and hence can play particularly to what elements of the economy certain individuals are most responsive or most attentive to.

Rhoda Metcalfe:

Right. You have to cater your message to the population that you're talking to.

Carlo Pizzinelli:

Exactly, and possibly utilize a wide variety of ways to communicate.

Rhoda Metcalfe:

So I'm curious, why were you drawn to this particular area of study? I mean why do you care about it?

Carlo Pizzinelli:

Well first of all, this study started back in 2018 when I was still in grad school or was about to finish grad school. Two of my co-authors did grad school with me, Johannes and Chris, and they are behavioral economists. I'm obviously a macroeconomist as I work at the IMF. But in grad school, as friends, you often talk about your research. And Johannes and Chris were already working on a research agenda on households' expectations.

As we talked more, we realized that it would be interesting to work in this growing area in which households' expectations eventually matter for macroeconomic outcomes. I personally find this interesting because ... I mean obviously I work as a macroeconomist so I understand from a theoretical viewpoint the importance of expectations. But I think it's very fascinating to see how that is ultimately something that households do every day.

And they acquire information every day, as they read the news and watch television. Obviously, they're not thinking that that information is going to factor into some decisions and that some people on the other hand are going to be looking at some aggregate numbers in which those decisions are ultimately factored in. But that's basically what people do in their everyday life without thinking about it. But it's hugely important for economists and ultimately affects the economy as a whole.

Rhoda Metcalfe:

So what do you think that policymakers can take away from the results of this study? And do you think that central bank leaders, policymakers, care more about what consumers think now than say 10 years ago?

Carlo Pizzinelli:

That's a very hard question. I think obviously our study is very preliminary and there would be more evidence that is needed to make some recommendations. But I think what comes out of it is the importance of communication and the ability with the right communication to steer expectations more effectively.

In terms of your second question, I would say, obviously policymakers have always cared about consumers. There is perhaps now greater attention to make sure that the communication reaches those consumers rather than just reaching experts. And many central banks over time have increased their presence, for instance, on social media, trying to make those press statements more accessible to people who are not necessarily experts in the field.

Rhoda Metcalfe:

Okay. Carlo Pizzinelli, thank you so much for telling me about this study and giving us a better understanding of the importance of consumer expectations on the economy.

Carlo Pizzinelli:

Well, thank you. It's been a pleasure to be with you and to have an opportunity to talk about my research.

Bruce Edwards:

That was Rhoda Metcalfe speaking with Carlo Pizzinelli, author of Hall of Mirrors: How Consumers Think About Inflation, published in the September edition of Finance & Development. Check it out at imf.org/fandd, and look for other IMF podcasts on Apple Podcasts, or wherever you listen.

I'm Bruce Edwards.

Rhoda Metcalfe:

And I'm Rhoda Metcalfe.

Bruce Edwards:

Thanks for listening.