Transcript

Cleveland Fed Conversations on Central Banking: The Unequal Burden of Inflation
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Welcome:
Chengcheng Jia, Research Economist, Federal Reserve Bank of Cleveland

Opening Remarks
Loretta J. Mester, President and Chief Executive Officer, Federal Reserve Bank of Cleveland

Moderator:
Rachel Sigel, Economics Reporter, *Washington Post*

Panelists:
Alberto Cavallo, Thomas S. Murphy Professor of Business Administration, Harvard Business School
Tara Sinclair, Professor of Economics and International Affairs, George Washington University; and Deputy
Assistant Secretary, Office of Macroeconomic Analysis, US Department of Treasury
Christoffer Jessen Weissert, Economist, Danmarks Nationalbank

Chengcheng Jia (00:07):

Welcome everyone to the Cleveland Fed Conversations on Central Banking series. I'm Chengcheng Jia with the Cleveland Fed. Thank you all for joining us today. This conversation is part of the work that we are doing at the Cleveland Fed and our Center for Inflation Research to help researchers, policy makers, and the public understand inflation and the monetary policy. Today our topic is the unequal burden of inflation. We have an outstanding program today in a short format. We'll jump into that in just one moment. Before we start, please ensure that you are muted and your video is off. If you are not a presenter, we'll have time for questions at the end. So if you have a question, please feel free to put in the q and a box anytime during the course of this conversation. You don't have to wait until the last minute. We'll now turn to Loretta Mester, president and CEO of the Cleveland Fed for our opening remarks.

Loretta J. Mester (01:14):

Thanks very much. Thank you very much. Thank you, Chengcheng. I also want to thank everybody for joining us for this session of Cleveland Fed Conversations on central banking. And I definitely want to thank today's panelists and moderator. So as Chengcheng said, this is a part of the work of the Cleveland Fed Center for Inflation Research and we set up the center to really further the understanding of inflation among economic researchers, policymakers, and the general public. And today's conversation centers on the unequal burden of inflation. So as we all know, inflation has been running above our 2% goal for more than two years now. Now it's still above 2%, but we are making discernible progress on bringing inflation down. Inflation affects everybody in the economy, but it is particularly hard for households and businesses that we're already having a hard time making ends meet. And it's important to remember that when inflation persists at levels above our goal, price stability, the price level is moving up faster than we'd like and households and businesses actually have to pay those higher than desired prices.

(02:31):

And that matters because it does take time for wages to catch up. If you look back when we started to see this higher inflation like the first quarter of 2021 till now, inflation's outpaced the increase in worker compensation. So despite the fact that there have been pretty sizable increases in nominal wages, compensation adjusted for inflation hasn't kept up with the high rate of inflation over this episode. So it's no wonder that surveys that the Cleveland Fed runs on inflation, people really show us and say they have a strong dislike of high inflation. It really affects 'em in their pocketbooks and then they have to make difficult choices just to make ends meet. And some of those choices may be that they invest less in education or training for a new job. Businesses might have to invest less in new plants, equipment and software. And then that has longer run costs on the overall economy by affecting productivity growth.

(03:29):

And so the growth rate, a potential growth rate of the economy and our longer run standing of living. So it's really costly to our economy in both the short and long run to have inflation remain so high for so long. And that's why there should be no doubt that the Fed is committed to returning inflation to 2% and we're going to get the job done. Now, I would say over the past decade, maybe a bit longer, there's been really an expansion, an explosion of data surveys and modeling techniques that allow economists to better understand how different parts of the economy, different segments of our economy really experience the economy. And the current episode of high inflation has really sped up those efforts. So now we have both the data and the tools to study the impact that inflation is having in different segments of the population. Now, monetary policy can't target particular segments of the population. It's a blunt instrument that works on the macro economy as a whole, but understanding the impact that inflation has on different segments of the population and different types of businesses is going to help us form better forecast for the economy and help inform our policy decisions. So I'm really looking forward to hearing from today's speakers and I'm very happy to introduce our moderator, Rachel Siegel, who's an economics reporter for the Washington Post, and she'll get the conversation started. So Rachel, please take it away.

Rachel Siegel (05:01):

Terrific. Thank you President Mester. And hi everyone. I'm so excited that the Cleveland Fed has brought together this esteemed group to talk about an issue that has been at the center of so much research and reporting since inflation took off during the pandemic and including today on the heels of the latest CPI report, which maybe we'll touch on a bit. We only have 45 minutes, so I will turn it over quickly. But to just give brief introductions to each of our panelists, Alberto Cavallo is the Thomas S. Murphy Professor of Business Administration at Harvard Business School. Much of his research has focused on the behavior of prices and how it all bears on macroeconomic models and policies. We also have Tara Sinclair, professor of Economics and International Affairs at George Washington University and currently Deputy treasury, deputy assistant secretary, excuse me, in the office of macroeconomic analysis at the Treasury Department.

(06:00):

She's also an expert in modeling and forecasting dynamics regarding the labor market and other aspects of the broader economy. And finally, we have Christoffer Weissert, an economist at the Danish National Bank and of the University of Copenhagen Inflation in inequality is right there in his area of expertise. And we're actually going to start with Christoffer who will introduce his topic. And then from there we'll go to Tara and Alberto. We'll have a brief panel discussion as well as question and answer. Some of you have already submitted questions, but if you would like to do so at any point, please drop them in the q and a button at the bottom of your zoom screen. And so with that, Christoffer, we'll go over to you.

Christoffer Jessen Weissert (06:46):

Hey everyone, and first of all, thanks to the Cleveland Fed for inviting me to participate in what promises to be a good discussion. Today's topic is an important and compelling one and immediately prompts the question is the burden of inflation unequal? And let me start out by answering that question before I dive further into the topic. The unanimous question, the unanimous answer to the question is, yes, the burden of inflation is unequal. To support that claim, I brought along some results from a recent study I did together with colleagues. The figure here reveals the distribution of inflation across US households. And what you see here is assuming on the latest inflation surge, specifically around the peak of inflation in the United States, what you'll observe is that while inflation affected everyone, it hit income poor households with significantly higher intensity compared to their income rich counterparts. And let me stress that this finding that inflation is unequally distributed, it's not new, but rather a consistent result across decades of research. And it should come as no surprise. Really, one of the most enduring empirical facts in economics is that people spend their money differently. When we cobble this with the reality that prices for various commodities evolved disparity, it inherently implies the existence of inflation and inequality.

(08:21):

Now having acknowledged that inflation is not the same for everyone, I think it's like opening Pandora's box. Numerous questions emerge and I'll lastly here, highlight some questions that I find particularly important. First, you should really want to know what driving forces behind this disparity in inflation are. Recent studies emphasize the role of income as a determinant of inflation, and I think this is a critical point as it contrasts with the possibility that varying consumer preferences could be the primary driver. And another way to study the drivers behind inflation inequality is to look at which price increases specifically impact poorer and wealthier households. And what seems to be the consensus among scholars is that price increases of basic goods such as food at home, gas and utilities hit income poor households harder. This is illustrated in this figure where we see a decomposition of the poorest and richest US households. Inflation. I think another important question that still needs a lot of work also is what implications this then has for economic policy. The recent episode with very high inflation showed us that there's a really strong political will to do something not only in the US but also indeed here in Europe. And this was not only by monetary policy authorities, but also by fiscal authorities. And I think it's important to know and study if what and how the design of policy could and should look like. Christoffer? Yes? Are you able

Rachel Siegel (10:09):

To share your slides or maybe try sharing them one more time?

Christoffer Jessen Weissert (10:12):

Oh, so where are you at the moment? I don't

Rachel Siegel (10:17):

Think we've been able to see them.

Christoffer Jessen Weissert (10:18):

Oh, that's a shame. Do you see this? There we go. Yes. Alright. Okay. Well let me pre run over what I was trying to at least put some words on. So this figure shows you the evolution of inflation in the United States over the recent years, and in particular, I assume in here on what happened during the peak of inflation. And what you see is that poor households, they experienced a much higher inflation rate than richer households. And then I was putting words on the fact that this is not something new to the literature and it really rests on one of the oldest empirical facts we have, namely that people spend their money differently. And I think after having acknowledged that there is inflation inequality, there's a lot of questions that you want to ask. One of them being what the drivers of inflation are. Income is an important determinant. That is what recent studies have shown, but also that price increases of basic goods tend to hit poor households much harder. And this is what this decomposition shows.

(11:43):

Lastly, I want to raise some questions about economic policy. I think it's super important that we study to a much larger extent if what and how we can design economic policy both from monetary policy authorities side, but also from fiscal authorities. And I think a prerequisite for doing good economic policy when it's needed is that we in a timely manner can track the distribution of inflation. Also, its drivers, I don't know how I did on time here, but I think I almost managed to squeeze them despite the lag of the slides in the first two, three minutes.

Rachel Siegel (12:29):

You did. Thank you so much. And we'll jump in with some questions on your presentation, but next we'll go over to Tara. Thank you, Christoffer.

Tara SInclair (12:39):

Thank you so much. Let me make sure I am, oh, I think I'm going to stop sharing his screen. Here we go. Do we have slides? Great. Okay, thanks for the thumbs up. So I'll also just quickly go over the treasury, take on the unequal burden of inflation. And as Christoffer already very clearly highlighted, there is an unequal experience of inflation across a range of different ways you can s slice households. And so I just hit some of the highlights from the literature here. We see that poorer households tend to see faster price growth firms innovate more on goods purchased by richer households, and that reduces their quality adjusted prices because firms are focused on the richer households rather than the full distribution choice sets for wealthier households. It's larger and so it's easier for wealthier households to shift expenditures in response to price changes and wealthier households engage in more sophisticated saving and investment behavior that protects them from I installation.

(13:49):

So that's just a few of many research findings that do really emphasize that we find unequal experience of inflation across households. And in general, it is the same story that we hear across all sorts of other unequal burdens that the burden is born by those that are least able to bear that burden and notably poorer households. However, I think we need to also take inflation in context and recognize that the distributional effects of inflation do not occur in a vacuum. There's a lot of other macroeconomic events going on and that's particularly important for thinking about the current economic conditions. And when we're thinking about policies as Christoffer ended with, and I'll end with as well, we want to think about the distributional effects of other aspects of the macro economy as well because they're all interrelated. So for example, there are distributional effects from a weak economic recovery.

(14:48):

For example, we see more child poverty, more hunger, more housing instability, poor labor market outcomes when we have a weak economic recovery. And this time around following the Covid recession, we had a remarkably strong recovery and we saw compression in the real wage distribution. And in fact, we see that even after accounting for price growth differentials between lowest and highest earners. One of the researchers in the office of macroeconomic analysis at treasury, Ethan Felic did this really nice analysis where he looked at real wages comparing the 10th percentile, so the poorer earners with 90th percentile to high income earners and following on some other research by Otter etal. And combining that with the jar's work shows that even when we look at the wage distributions by adjusting for that higher inflation burden, that the lower income there, they still saw improved real wage outcomes over the course of the pandemic recovery, whereas the 90th percentile saw declines in real wages.

(16:03):

And so we saw that real wage compression. So I think it's important to keep in mind that when we see this equitable recovery that we've experienced that that may be enough to offset some of that unequal burden of inflation. And so just to highlight some of the key features of that equitable recovery labor markets, we saw gaps between black and white and Hispanic and white unemployment rates closed substantially dropping to near historic lows earlier this year. In terms of income, we saw median real hourly wages having risen substantially, particularly for low income workers as I highlighted on a previous slide. And in terms of wealth, household net worth has risen faster for poorer households during their recovery for the pandemic recession, and that is really rare historically. So despite the fact that we are seeing this experience of higher inflation, we've also seen equitable recovery on other dimensions.

(17:01):

So just to conclude, distributional effects are complicated and we need to be careful of this literature discussion of innocent bystanders where we might do policy to address the distributional effects in one direction, but we might then have distributional effects in another direction or other offsets. When we think about policy, we have to think about it very holistically. It is important to remember that we have had a remarkably equitable recovery in real terms, meaning accounting for inflation. I still think there's reasons to be optimistic about current economic conditions. Now of course we still need a lot further research on the causes, both of the recent inflationary episode and on how to assess the broader distributional issues of inflation. And finally, policy in the of unequal burdens of inflation is a particular challenge for a range of regions. But one I'll just highlight just to wrap up is that the redistribution, if we wanted to offset the unequal impacts of inflation, might fan the flames of inflation by redistributing towards households with a higher marginal propensity to consume, which might stoke demand. And so there's that trade off we have to think about really carefully when designing policy. I'll stop there.

Rachel Siegel (18:14):

Thank you, Tara. That's terrific. We'll also have lots of questions to loop back to you on after Alberto's closing presentation. Thanks, Alberto. I think you're on mute, but your slides are up.

Albert Cavallo ([18:30](#)):

Great, thanks. So I've got one of the things right, so great, thank you so much. I think I'll summarize part of the discussion and touch upon some of the issues that already Tara and Christoffer have pointing out. But I'll say every time we say things like inflation, disproportionate effects, low, low-income households, as data has pointed out, we are thinking both in terms of the lower ability of low-income households to adjust their wages, their incomes to perhaps protect their savings. And then we have the separate issue of whether the actual inflation rate that they experience is different. So I'm going to focus on the second part, the one that I can actually measure and show you some results based on my research. Let me start by saying that Covid was clearly a shock to many of us. One of the things that it did, it changed our consumption patterns a lot in particular for everyone.

([19:23](#)):

And if you take first an average view on this, and I'm showing you here some pictures from a paper I wrote early on on the pandemic, it was a fact that right after the shock and covid hit this expenditure, changes in the basket of consumption affected all of us and meant that the fixed basket CPI for quite some time was actually underestimated the annual inflation rate. But what I also showed in that paper was that if you focused on different income levels and you measured the basket using the CX expenditure data that we had in the US already before the pandemic and adjusted based on credit card data for both low and high income households, the low income households were actually the most affected by these chains in expenditures, particularly because they consume more food traditionally they do consume more food at home and in the us relatively less transportation.

([20:28](#)):

So we were all hit by this pandemic. We were actually consuming a lot more food at home. The initial differences that low-income households had meant that in practice they were facing much higher inflation rates, that high income household. So just to be clear, everyone was experiencing more inflation and the fixed basket CPI reflected, but given that the low income house costs disproportionately consume more food at home, the impact was actually greater, which is shown in the graph for annual inflation rates that you see on the right. Now, fast forward to 2021, this actually reversed at least in the data that I'm computing based on expenditure patterns of the us. And the reason for this was that during 2021, fuel prices and transportation prices, the prices of services, things that are actually more heavily weighted in the basket of high income consumers we're actually rising faster.

([21:28](#)):

Now this is at a very high level of aggregation. What we are not measuring here is what happens within categories. And that's a bigger challenge. There are a lot of papers about more aggregate patterns. So I want to focus just a second on that and tell you we've actually made efforts to try to go within categories and identify goods that low income households are more likely to buy. How do we do it? Well, we don't have those expenditure service in real time for high and low incomes to identify the goods by looking at what they purchase. But we can within categories, identify varieties that are relatively cheaper. And we do that by looking when we go online, we can see for each good the price per unit. So in this case, I'm showing you a few examples with some XI can identify the cheapest variety within this narrowly defined set of goods, start at the beginning of 2020 and then follow the inflation rate over time.

([22:24](#)):

Now these are varieties that are more likely to be chosen by low-income households. Now let me show you what we found. We found this is joint work with Isabel d Taylor, who's a economist PhD student that MIT. We found that the least expensive goods, the ones that we classified as least expensive in 2020, actually experienced a lot more inflation during 2021 and 22 in particular. So on the left you see the price index on an accumulated basis, the price level increased by about 17 18%, whereas for the most expensive varieties, the increase was only 6%. And by the way, when we drew these graphs in the end of, or I would say I think it was August of 2022, the inflation rate, the annual inflation rate for those cheaper varieties was 15% relative to seven. So big difference, it's something that we traditionally do not capture in our inflation statistics. And to some extent if we were to capture this at times like this, we might be able to make more nuanced analysis of what really was happening to the inflation gap and to the wage gap in real terms during this time period. So I think there has to be more effort into measuring inflation inequality, not just at aggregate levels, which I think many statistical agencies are thinking about, but also collecting more micro data so that we can go within categories and understand better those consumption patterns. Thank you.

Rachel Siegel (24:05):

Well that was terrific. Thank you so much everyone. And we are also making a great time with plenty of time for questions. I feel like a theme that was coming through, at least for me listening to the presentations was this follow-up question of, okay, well what is the policy implication either on the monetary front or on the fiscal front? And Tara, I wonder if we can start with you. You talked about taking a holistic approach, a policy approach that accounts for things like child poverty, hunger housing. Can you elaborate on what that could look like on the fiscal side when we're thinking about inflation?

Tara SInclair (24:37):

Yeah, I mean I think it's really complicated, but I think it it's important and I mean I think the first step is looking at least at the overall household income and adjusting it not just necessarily for the overall inflation rate, but for the relative. So as Alberto was talking about these different experiences of price growth, I'm going to be careful here because I am very much of the old school view that inflation is something that we talk about at the aggregate level. And so different groups experience different relative price growth, but we might loosely say they have different inflation rates for ease of language here, but that's just about income and earnings. And Robert Rich pointed out in the q and a some nice issues about composition of earnings matters here. And then as Rachel as you were highlighting in your question, it isn't just about earnings.

(25:42):

So we do also focus on wealth. We talk about wealth in some of this research that matters, but how do we appropriately measure child wellbeing? How do we think about some of the things that Loretta brought up at the beginning in terms of thinking about our people able to invest in education for their long-term? So this becomes a very multidimensional feature of things. And so I will actually point out to one of my colleagues at George Washington University, James Foster. He does all this research on measures of multidimensional poverty and I think that's what we have to think about here. And so we really want to think about all of those dimensions and not just focus on, and particularly not just focus on distributional impacts of inflation because that does tie into people's experience on other fronts.

Rachel Siegel (26:34):

Alberto, you are nodding quite a bit. Is there anything you want to add just in terms of how you answer this question of the policy implication, either fiscal, otherwise?

Albert Cavallo (26:45):

I think Tara made it very clear, but I always start from the perspective of policy makers need to be able to see these differences before they actually decide the policy. So that's why I put so much emphasis on us improving our data sources and improving our measurement so those decisions can be done even mostly on the fiscal side, that's where they can be achieved.

Rachel Siegel (27:09):

Christoffer, is there anything that comes to mind for you on this front?

Christoffer Jessen Weissert (27:12):

Yeah, that was also what I was trying to allude to at the end that I think timely tracking of this is a really important issue that I think there are some promising techniques out there. And as Loretta also said in the beginning, we have seen a speed up in our techniques and I think this is promising to see what we can do looking ahead.

Rachel Siegel (27:36):

I don't mean for this to be repetitive to what you each presented, but Alberto, I was fascinated by the chart that you showed at the end about some of the least expensive items actually having some of the steepest inflation rates. Are there other data points like that that you would each share that you found to be especially revelatory or surprising in some way in teasing out this sort of realtime examination of what people's baskets of the goods can look like, how someone's personal inflation rate can vary? Other examples like that, at least for me are really interesting. So just curious if others come to mind.

Albert Cavallo (28:12):

So we are trying to now understand what was driving these patterns that I showed you. And we believe it could be driven by several things and we're finding some evidence to support. So I'll mention a few things. One of the ideas could be that there was a lot of expenditure switching towards these more basic cheaper varieties that happened. It happened at all income levels. We all tried to shelter ourselves on inflation. We put more demand there. And that relatively higher demand is pushing prices. Unfortunately, there's not much scanner data yet available to be able to prove this, but I think it's consistent with what Tara was saying, this paper by Avida Hint and Lee that show the expenses switching actually on higher income consumers may have been quite large towards these lower varieties in overall that brought up demand. There's also one where we have more evidence but was with the pattern of sales during the pandemic.

(29:10):

So sales mostly are traditionally applied to these varieties over time. And we saw a decline in sales activity during the pandemic a lot. So not only were people consumer more of these goods, but traditionally they used to have sales and they no longer had them. So that contributes also to high inflation. And then there's the question of markups and what's been happening with markups of more premium and low premium goods. What we are in a few data sets that are coming straight from firms that manufacture both high end and low end goods is that low end goods or cheaper, right? These more affordable ones tend to have smaller markups traditionally, and then it cannot act as a buffer when these companies get hit by a cost shock. They don't have much margin to absorb that shock and try to gain market share. So they pass it on quite quickly.

(30:08):

And that can explain some of these, but I'm bringing this up as examples of how through the use of more detailed data, we can actually test some of these theories we may have and see if that's actually happening or not. And I will mention just one more thing, which I think is important for policy, which is in normal times the inflation inequality difference may not be that large, but when you get a shock like Covid or get an event like this where policy has to react, that's precisely the moment where we need to know if there are these differences happening because that's likely when it's going to show up.

Rachel Siegel (30:44):

That's terrific. Tara, is there anything you want to add there?

Tara SInclair (30:50):

I think I'd like to hear what Christoffer has on this one from his research.

Christoffer Jessen Weissert (30:55):

Yeah, so I think I completely agree with what Alberto said, and I also think that a lot of the evidence that we have sort of seen over the recent years is stemming from scanner data, which is super, super highly detailed, nice datasets. But one of the things that we also abstract from when we use these kind of data sets is that we are only able to look at non durable consumption. So a very specific subset of the entire consumption basket. And in some of the recent research that we also did, we included durable consumption and we found that there's been a star increase in the prices of non durable goods and services, whereas durable goods prices have not increased as much. And when you then look at who consumes durable goods, you find that it's mostly income richer households that do so, and that maybe also explains why there's been a divergence in inflation rates across income groups.

Rachel Siegel (32:00):

Got it. Terrific. Christoffer, there was another question that came up for you in the chat asking if you could elaborate on what you mean by fiscal authorities getting more involved in controlling inflation. I know from where I sit that's often something that is squarely in the fed's remit, so curious if you could share more on that.

Christoffer Jessen Weissert (32:19):

Yeah, yeah, sure. Yeah, so I think the recent episode with high inflation both in the US and Europe and elsewhere showed us that there was a lot of political will and a lot of things happening around in western economies, not the least, where fiscal authorities, they took some measures, say either they put a cap on the price of electricity as was done here in Europe and put some cap on prices in medicine in the US with the inflation act, you also had different transfers to low-income households, specifically targeting the fact that politicians were sort of having in their guts that these households were also the ones who were struggling the most. And these type of fiscal measures I think are super important to understand if how and when we should do so. And I think a super important prerequisite is knowing exactly how much are these households hit and what is driving their inflation up. Yeah,

Rachel Siegel (33:28):

Terrific. Thank you. There's another question that just came up that I think gets to this idea of how we're defining different inflation rates in the first place. It says one should consider different definitions that define inflation for different wealthy groups. If so, one could obtain more reasonable impact of price growth for different wealthy groups. For anyone. Tara, maybe we could start with you. Are there ways that you're thinking about these different definitions separate from the research that you're doing?

Tara SInclair (33:58):

Well, absolutely. I mean, so that's some of the analysis that I was sharing. And of course Alberto's work on this is constructing exactly these kinds of measures. And it's tricky to think about though because if we're wanting to use these for policy for example, then we need to have some sense that these groups are stable over time. But if people are moving into different income or wealth deciles, then they might be moving across these different definitions. And so then thinking about the policy implication is very different. If a person is regularly changing their consumption basket and how that's affecting their particularly individually experienced relative price growth or inflation, that's very different than if people are more stuck in a category and consistently over time experiencing the same thing. That's perhaps more important to target that group for policy. And it's also possibly easier to target those groups for policy. And there's mixed evidence on how much people are moving. There is a sense in which people have a lifecycle experience of consumption that does change over their lifecycle, but there's also a sense that some people are consistently left either in the high group or the low group and they never move. And so I think that's another aspect of this issue that even if we're tracking these different groups over time, that the members of these groups might change and that would affect how we think about policy.

Rachel Siegel (35:41):

Thank you. Christoffer, you got a hand up?

Christoffer Jessen Weissert (35:44):

Yeah, so I think also another interesting thing from the most recent techniques is that we are actually now able to control for this fact that people move in and out of different income groups. It's sort of an involved technique, but it's also something that the recent episode has baked us to come up with and just to say that this is actually something that we are able to at the moment, and the figure I showed you was actually controlling for the fact that people can move in and out. And what we did in an exercise with this method was to then see if it's, so if you consider household that over the lifetime has different income levels, what does that then imply for also the inflation you experience over the lifecycle? And even though that there are some households that move in and out also of say inflation groups, this lifecycle pattern of income is really not the biggest driver of the differences in inflation. I think that's a very interesting finding as well.

Rachel Siegel (36:51):

Christoffer, we could, or Alberto, do you want to jump in with anything else before I ask another question?

Albert Cavallo (36:55):

Yes. No, there's this, whenever we talk about new data, we can all get excited about measuring very disaggregated patterns as well. But I think it's important to remember for policy you want to start relatively aggregating, keep it relatively simple. So we don't have, in many countries still measures of inflation for high and low incomes. It's not something that statistical agencies do, but I think even taking into account aggregate expenditures and big sectors for example. So that's the first step and I think that would be very useful for policy. And then you have more targeted policy that may want to at certain points in time deal with particular groups. And for that you want to have a more targeted measure. But I think it's also important not to go overboard and just try to measure the inflation rates of very small groups unless there's a clear policy objective that we can identify.

Rachel Siegel (38:00):

Christoffer, did you want to jump that again or I can ask you another question.

Christoffer Jessen Weissert (38:02):

Definitely. And first of all, I completely agree with what EZ was saying, but I also want to tease him a little bit and also just to open up the debate, once you allow for the fact that everyone is experiencing a different level of inflation, then the question is also does the aggregate inflation level actually exist? And if, what is that level? Actually, I think this is a really, really big question and it would be super nice structured ideas and I'm sure that we will end up at something which looks quite close to what we are statistical agencies already producing, but just having that there is also I think, important.

Tara SInclair (38:51):

Well, yeah, I mean I think that this is, again, something that perhaps matters much more when we have a high inflation rate than if we think about a low and stable inflation rate as well. Where one of the things that we've been tracking at treasury is the distribution, not across individual households and their experience of inflation, but across the price change distribution across different goods and services. And one of the features of the recent inflationary episode has been not only has the average been high, but that the distribution price changes across goods has become much, much wider. And so therefore, if you are a business that's just starting to sell a new product and you're thinking, okay, what should I raise my prices by? Maybe historically you could just use the mean because the distribution was pretty tight around that, but now you have to think when it's wider, it's broader. So this leads to another possible policy question, which is should we be not just targeting what the average inflation rate should be, but how tight that distribution is, is around that average or is targeting the average enough to also with low, do we also get a pretty narrow distribution? Those are more on the monetary policy side. Questions, the things I like to think

Rachel Siegel (40:16):

About. Albert, I'll go to you and then I think we might have time for one more question.

Albert Cavallo (40:19):

I think those are both excellent points. This issue of the distribution and measuring that distribution, how changes over time and the different episodes by the way, makes it even more valuable to monetary policy because we've said before, monetary policy is a blunt tool. Fiscal policy would look at these patterns, but if you think about it, when inflation becomes more dispersed, it means that different people are experiencing different inflation rates and therefore potentially their expectations of inflation are quite different. There's a growing literature that has looked at this, how people form their expectations based on their own purchases rather than more aggregate average indicators. So understanding that is quite important for monetary policy as well. So I'm on board on measuring that dispersion and how it changes over time. Absolutely.

Rachel Siegel (41:12):

I do want to get to president Master's question. She asks, is there any possibility of having official government statistical agencies to collect the data that would allow us to better track inflation by income level? Christoffer, you responded. Yes. Excl point. So we can start with you.

Christoffer Jessen Weissert (41:29):

Sure. Yeah. So it's actually just to advertise what I'm working on at the moment, please more. Yeah. So in some work we're doing at the moment, we are looking at the PC inflation rates and we are building up a method that requires two things. First of all, it requires the aggregate level of inflation, which is the measure that we get every month, and which is also a measure we got today for the US for the CPI. And then it requires information about the income distribution, so the Lawrence curve. And once you have those two things in place, we can actually also back out the distribution of inflation underneath the aggregate level of inflation. This also comes back to the question about whether aggregate inflation exists and this setting, it doesn't. It also tells you something about the underlying inflation for different household groups. And yes, this is something which we can do within time.

Rachel Siegel (42:43):

Anything to add Can throw one more question in. Now I was curious, maybe this is a big question with two minutes left, but what solutions to poverty come from these data sets was just an interesting question to me. Whoever wants to grab it and then that'll probably be our last question.

Tara SInclair (43:02):

Well, I'll jump in. And so what I will say is that based on our analysis, addressing just the unequal burden of inflation isn't enough to address poverty. So I think it's a first step and as Alberta pointed out, maybe it's even worse during high inflationary times, but that isn't going, poverty is a much deeper, much more complex problem. But I think both Alberta and Christoffer have pointed out that if we keep measuring things, if we keep getting a deeper understanding of the individual household experience across not just what they're experiencing in terms of prices, what they're experiencing in terms of labor market opportunities, that's really where I think we start to learn insights about these households that as we better understand their needs, we can better understand ways that policy could address those needs.

Rachel Siegel (44:05):

Anything else? Any other parting messages from our panelists before I wrap up? No. Well thank you so much everyone. Thank you Alberto, Tara, Christoffer, the Cleveland Fed for bringing this discussion together and to the audience for the great questions we could have kept going and hopefully we'll be able to do it again soon. So thanks so much for joining everyone, and have a good rest of your Tuesday.