[Preliminary and incomplete; please do not distribute]

HOW IS TRADE POLICY UNCERTAINTY IMPACTING CONSUMERS' INFLATION EXPECTATIONS AND THEIR SPENDING DECISIONS[1]

Bernardo Candia
UC Berkeley

James Mitchell
Federal Reserve Bank of Cleveland

Damjan Pfajfar
Federal Reserve Bank of Cleveland

This draft: July 17, 2025

Abstract: Using a daily survey of U.S. consumers, we study how trade policy uncertainty influences consumers' inflation expectations and their consumption decisions. Our preliminary results suggest that trade policy uncertainty and consumers' inflation expectations are highly correlated. Those consumers that have higher inflation expectations due to increases in trade policy uncertainty index report significantly lower current consumption in the period since the U.S. Presidential elections. This preliminary result is in line with Democrats having higher inflation expectations than Republicans and a more pessimistic view of the state of the economy, therefore higher inflation expectation tend to currently reduce spending.

[1] The authors declare that they have no relevant material or financial interests that relate to the research described in this paper. No financial support was granted for the research described in this paper. The views expressed in this paper are solely the responsibility of the author and should not be interpreted as reflecting the views of the Federal Reserve Bank of Cleveland or the Federal Reserve System.

"Tariff is the most beautiful word in the dictionary." Donald Trump

I Introduction

After World War II, many countries, including the United States, gradually adopted policies of trade liberalization to increase globalization, foster economic growth, and benefit both consumers and producers. After the 2024 U.S presidential elections the global trade landscape has been shaken up. To address trade deficits and boost domestic manufacturing, imposing larger tariffs on US trading partners was not a broken campaign promise. According to the Budget Lab at Yale, the Effective Tariff Rate has risen from 2.4% in 2024 to 19.7% by July 2025, the highest since 1933. This tariff policy led to retaliation from major trading partners, interrupting the trade liberalization process. The ultimate impact of trade policy uncertainty on consumer inflation expectations and economic decisions is at the heart of our paper. Before the 2024 US presidential election, we find a negative relationship between trade policy uncertainty, measured as the frequency of joint occurrences of trade policy terms across major newspapers, and inflation expectations, suggesting that higher uncertainty regarding trade was associated with a perception of reduction in inflation. In contrast, following the presidential election and driven by the current administration's tariff policies, higher trade uncertainty is linked to higher inflation, suggesting that American consumers perceived they would bear a significant share of the cost of tariffs.

II Data

We use a daily online survey of consumer expectations conducted by the Federal Reserve Bank of Cleveland since March 2020 (see Knotek et al., 2020, 2025; Dietrich et al., 2022; Coibion et al., 2023b). This survey is fielded by Qualtrics Research Services, where respondents drawn from several actively managed, double-opt-in market research panels, complemented using social media to guarantee the representativeness of the sample (Qualtrics, 2019). In the survey, consumers are asked a variety of questions about their demographic characteristics, economic expectations, and consumption choices. Our sample consists of about 230,000 responses, with on average over 100 responses per day. Consumers are not followed over time—our sample is a repeated cross-section of observations.[2]

We use the daily trade policy uncertainty (TPU) data that is constructed by Caldara et al. (2020). The TPU index is calculated as a share of articles discussing trade policy uncertainty in the total number of news articles in the following newspapers: Boston Globe, Chicago Tribune, Guardian, Los Angeles Times, New

[2] We reweight our respondents to ensure that our sample is representative of the US population.

York Times, Wall Street Journal, and Washington Post. In specific, we use 30-day moving average of the TPU index.[3]

Figure 1 shows the 30-day moving average of the implied mean of the distributional question about one-year-ahead inflation expectations from the Cleveland Fed's daily survey of consumers and the TPU that we use in the analysis. We can observe that after the 2024 U.S. Presidential elections both measures have increased considerably.

III Trade policy uncertainty and inflation expectations

To assess how trade policy uncertainty affects inflation expectations, we regress households' expectations on the log of the 30-day moving average of the trade policy uncertainty index (TPU). We control for aggregate GDP growth expectations. We also include the importance of international trade in the respondent's state, measured as the sum of imports and exports as a percentage of GDP. Additionally, we control for various respondent characteristics, including gender, age, age squared, education, income, ethnicity, English fluency, political affiliation, and region. An interaction between political affiliation and TPU is included. Table 1 reports the results.

Column (1), for example, shows results for the full sample (March 2020 to May 2025). Interestingly, higher TPU is associated with lower inflation expectations. Those with higher GDP growth expectations, living in a state open to international trade, being male, and having a higher income generally also have lower inflation expectations. On the other hand, education, English fluency, and age are associated with higher inflation expectations. Consistent with Binder, Ramdar, and Ryngaert (2024) and Binder, Couture, and Smit (2024), who show that inflation expectations are more anchored for respondents of the same party as the president, Democrats have lower inflation expectations than Republicans in the full sample, and the combined effect between political affiliation and TPU is stronger for Democrats.

In Columns (2) and (3), we split the sample between before and after the US presidential election of November 6, 2024. We now find a positive relationship between inflation expectations and TPU after the presidential election (see Column 3), which is driven by the fact that American consumers expect a higher pass-through of current administration tariff policies into the prices of both imported and domestically produced goods (Coibion, Gorodnichenko, and Weber 2025). Moreover, we don't find significant

[3] The index is normalized to a value of 100 for a one percent article share discussing trade policy uncertainty.

differences between Democrats and Republicans, suggesting that, regardless of political affiliation, higher tariffs are associated with higher prices.

Columns (4) - (6) present equivalent results when we use as a dependent variable the logarithm of inflation uncertainty, measured as the standard deviation of the reported distribution for one-year-ahead inflation expectations. For the full sample (see Column 4), we find a positive and significant relationship between inflation uncertainty and TPU; however, this relationship is driven by the post-presidential election period (see Column 6). Expected GDP growth, relative importance of international trade, and being Hispanic are associated with higher inflation uncertainty. In contrast, education, income, English fluency, and being male are associated with lower inflation uncertainty. Democrats' expectations are more disperse than Republicans' expectations.

IV Inflation expectations and consumption decisions

In this section, we evaluate the causal effect of variation in short-run inflation expectations, induced by trade policy uncertainty index through the lens of their political views, on consumers' current expectations. We estimate a simplified version of the Euler equation. The implementation follows Coibion et al. (2023), showing a reaction of current spending to a movement in inflation expectations induced by the perception of trade policy uncertainty. The first-stage estimation uses the specification that includes political views, trade policy uncertainty index, and the interaction among them. In the second stage, we estimate the causal effect of inflation expectations, identified in the first stage, on current spending decisions for different spending categories and controlling for 1-year ahead expectations for the corresponding spending category. In the second stage we also control for GDP growth expectations and social and demographic characteristics of consumers. Note that not all spending categories are available for the post-election sample.

Table 2 reports our preliminary results. In all estimations coefficients on 1-year ahead expected spending are positive and relatively high, but significantly less than 1, indicating results that could be consistent with discounting of the Euler equation. Regarding the effect of inflation expectations on current spending, the results suggest that in the pre-election sample the coefficient is significant and positive in nearly all estimations (total spending, services, non-durables, durables) and not just for the durable goods, as commonly found in the literature. The coefficient becomes significantly negative in the post 2024 presidential elections sample, as in this subsample Democrats have higher inflation expectations than Republicans and a more pessimistic outlook for the economy. This result is consistent with the notion that

Republicans—that have lower expectations of inflation—tend to spend more in the current environment and Democrats that have higher inflation expectations are postponing their consumption plans.

V Plan for the randomized control trial

We plan to include the following set of questions to the Daily survey of Consumers to better understand how consumers form inflation expectations when there is a tariff shock.

1. Over the next 12 months, do you think that there will be inflation or deflation?

o Inflation (1)

o Deflation (opposite of inflation) (2)

2. What do you expect the rate of inflation to be over the next 12 months? Please give your best guess.

I expect the rate of inflation to be ___ percent over the next 12 months.

3. What do you expect the rate of deflation to be over the next 12 months? Please give your best guess.

I expect the rate of deflation to be ___ percent over the next 12 months.

4. By how much do you think the rate of inflation/deflation will change as a consequence of higher tariffs? Please use the sliders below to indicate the percent change. If you think that the rate of inflation/deflation will fall enter a negative percentage, if you think it will increase provide a positive percentage.

5. What is your best guess about what the current effective tariffs rate in the U.S. is? The effective tariff rate represents the percentage increase in the producers' cost of goods due to tariffs on both final goods and imported inputs. Please provide a percentage.

INFORMATION TREATMENT
RANDOMLY ASSIGN RESPONDENTS TO ONE OF 2 GROUPS:
Group 1: (1/2 of the sample): go straight to final questions
Groups 2: (1/2 of the sample)

;SHOW IF Group 2:

According to the Budget Lab at Yale, the Effective Tariff Rate has risen from 2.4% in 2024 to 19.7% by July 2025, the highest since 1933.

6. What do you expect the rate of inflation to be over by the end of next year? Please provide an answer as a percentage change from current prices.

……. % [RANGE: -100 to 100, ONE DECIMAL]

If you think there will be inflation, please enter a positive number. If you think there will be deflation, please enter a negative number. If you think there will be neither inflation nor deflation, please enter zero.

7. What is your best guess about what effective tariffs rate in the U.S. will be in 3 months? The effective tariff rate represents the percentage increase in the cost of domestic production due to tariffs on both final goods and imported inputs. Please provide a percentage.

VI Concluding remarks

Our analysis uses a daily survey of U.S. households, we study how trade policy uncertainty influences the inflation expectations of individuals and their consumption decisions. Our preliminary results suggest that trade policy uncertainty and consumers' inflation expectations are highly correlated. Those consumers that have higher inflation expectations due to increases in trade policy uncertainty index report significantly lower current consumption in the period since the U.S. Presidential elections.

References

Binder, Carola C., Rupal Kamdar, and Jane M. Ryngaert. 2024. "Partisan Expectations and COVID-era Inflation." Journal of Monetary Economics 148: 103649. https://doi.org/10.1016/j.jmoneco.2024.103649

Binder, Carola C., Cody Couture, and Abhiprerna Smit. 2025. Partisan Trust in the Federal Reserve. No. w33684. National Bureau of Economic Research.

Caldara, Dario, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo (2020), "The Economic Effects of Trade Policy Uncertainty," Journal of Monetary Economics, 109, pp.38-59.

Coibion, O., Georgarakos, D., Gorodnichenko, Y., Weber, M., 2023. Forward Guidance and Household Expectations. Journal of the European Economic Association

Coibion, Olivier, Yuriy Gorodnichenko, Edward S. Knotek II, and Raphael Schoenle. 2025. “Average Inflation Targeting and Household Expectations.” Journal of Political Economy Macroeconomics 1 (2): 403-46. https://doi.org/10.1086/722962.

Coibion, Olivier, Yuriy Gorodnichenko, and Michael Weber. 2025. “The Upcoming Trump Tariffs: What Americans Expect and How They Are Responding.” Manuscript.

Dietrich, Alexander M., Edward S. Knotek II, Kristian Ove R. Myrseth, Robert W. Rich, Raphael S. Schoenle, and Michael Weber. 2022. “Greater Than the Sum of the Parts: 32 Aggregate vs. Aggregated Inflation Expectations.” Federal Reserve Bank of Cleveland, Working Paper No. 22-20. https://doi.org/10.26509/frbc-wp-202220.

Knotek, Edward S., II, Raphael S. Schoenle, Alexander M. Dietrich, Keith Kuester, Gernot J. Müller, Kristian Ove R. Myrseth, and Michael Weber. 2020. “Consumers and COVID-19: A 33 Real-Time Survey.” Economic Commentary 2020-08. Federal Reserve Bank of Cleveland. https://doi.org/10.26509/frbc-ec-202008.

Qualtrics. 2019. “ESOMAR 28: 28 Questions to Help Buyers of Online Samples.” April 2019, Technical Report. https://www.iup.edu/arl/files/qualtrics/esomar.pdf.

Knotek II, Edward S., James Mitchell, Mathieu O. Pedemonte, and Taylor Shiroff. 2025. "The Effects of Interest Rate Increases on Consumers' Inflation Expectations: The Roles of Informedness and Compliance." Working Paper No. 24-01R. Federal Reserve Bank of Cleveland. https://doi.org/10.26509/frbc-wp-202401r.

Table 1: Effects of Trade Policy Uncertainty on Inflation Expectations and Inflation Uncertainty

	Dependent Variable					
	Expected inflation			100 x log (Inflation uncertainty)		
	Full	Pre-election	Post-election	Full	Pre-election	Post-election
	(1)	(2)	(3)	(4)	(5)	(6)
Log (trade policy uncertainty)	-0.625***	-1.058***	0.734***	1.934***	-0.042	10.970***
	(0.034)	(0.082)	(0.185)	(0.454)	(1.072)	(2.598)
Expected GDP growth	-0.034***	-0.030***	-0.056***	1.198***	1.188***	1.237***
	(0.001)	(0.001)	(0.004)	(0.016)	(0.017)	(0.048)
Share international trade	-0.880***	-0.833***	-1.185***	10.086***	9.079***	18.665***
	(0.144)	(0.154)	(0.393)	(1.901)	(2.026)	(5.478)
Age	0.072***	0.082***	-0.001	1.649***	1.588***	1.980***
	(0.004)	(0.005)	(0.012)	(0.059)	(0.062)	(0.169)
$Age^2/100$	-0.034***	-0.041***	0.024**	-3.284***	-3.237***	-3.519***
	(0.004)	(0.005)	(0.012)	(0.060)	(0.064)	(0.171)
Male	-0.593***	-0.596***	-0.482***	-4.124***	-4.296***	-4.279***
	(0.025)	(0.026)	(0.067)	(0.327)	(0.349)	(0.938)
English fluency (omitted: less than fluent)						
Fluent	1.242***	1.286***	0.958***	-7.906***	-7.994***	-7.516*
	(0.116)	(0.124)	(0.319)	(1.476)	(1.577)	(4.198)
Native	2.081***	2.136***	1.673***	-27.794***	-27.764***	-27.343***
	(0.115)	(0.124)	(0.317)	(1.466)	(1.566)	(4.168)
Education (omitted: High school or less)						
Some college, but not degree	0.683***	0.669***	0.803***	-13.598***	-13.054***	-16.963***
	(0.034)	(0.036)	(0.093)	(0.457)	(0.488)	(1.306)
Bachelor's degree	0.714***	0.651***	1.091***	-23.270***	-22.357***	-28.677***
	(0.034)	(0.037)	(0.091)	(0.453)	(0.485)	(1.277)
Master or doctorate degree	0.082**	-0.022	0.886***	-13.005***	-11.641***	-23.663***
	(0.042)	(0.044)	(0.117)	(0.542)	(0.577)	(1.610)
Income (omitted: Less than $35,000)						
[$35,00-$100,000]	0.085***	0.127***	-0.172**	-7.855***	-7.743***	-8.299***
	(0.028)	(0.030)	(0.077)	(0.380)	(0.405)	(1.089)
More than $100,000	-0.520***	-0.525***	-0.426***	-3.482***	-2.812***	-9.171***
	(0.039)	(0.041)	(0.108)	(0.508)	(0.540)	(1.509)
Hispanic	-0.334***	-0.349***	-0.234**	4.789***	5.043***	3.242**
	(0.040)	(0.043)	(0.110)	(0.519)	(0.554)	(1.480)
Region (omitted: East)						
South	0.119***	0.156***	-0.168*	0.282	0.018	2.702**
	(0.033)	(0.036)	(0.091)	(0.440)	(0.469)	(1.274)
Midwest	0.278***	0.307***	0.162	-7.124***	-7.479***	-4.166***
	(0.038)	(0.041)	(0.103)	(0.501)	(0.534)	(1.438)
West	0.053	0.046	0.250**	-0.727	-0.973*	0.915
	(0.040)	(0.042)	(0.116)	(0.521)	(0.549)	(1.618)
Political Affiliation (omitted: Independent)						
Democrat	-3.441***	-1.038**	1.203	14.944***	4.979	15.543
	(0.198)	(0.430)	(1.476)	(2.611)	(5.613)	(20.696)
Republican	4.363***	2.156***	-0.745	6.450**	-11.221*	-25.593
	(0.203)	(0.459)	(1.478)	(2.705)	(6.079)	(20.638)
Other	-0.106	1.555*	-5.192*	3.669	-1.209	36.088
	(0.382)	(0.858)	(2.714)	(4.994)	(11.256)	(37.377)
Political Affiliation X Log (trade policy uncertainty) (omitted:Independent)						
Democrat	0.667***	0.074	-0.061	-1.102*	1.288	-1.151
	(0.045)	(0.105)	(0.248)	(0.596)	(1.361)	(3.477)
Republican	-0.936***	-0.393***	-0.101	-0.206	4.156***	4.986
	(0.046)	(0.111)	(0.248)	(0.611)	(1.471)	(3.465)
Other	0.053	-0.348*	0.921**	1.227	2.467	-4.397
	(0.087)	(0.208)	(0.456)	(1.127)	(2.713)	(6.288)
Observations	228,121	200,310	27,611	172,752	151,362	21,230
R-squared	0.063	0.063	0.069	0.263	0.265	0.258

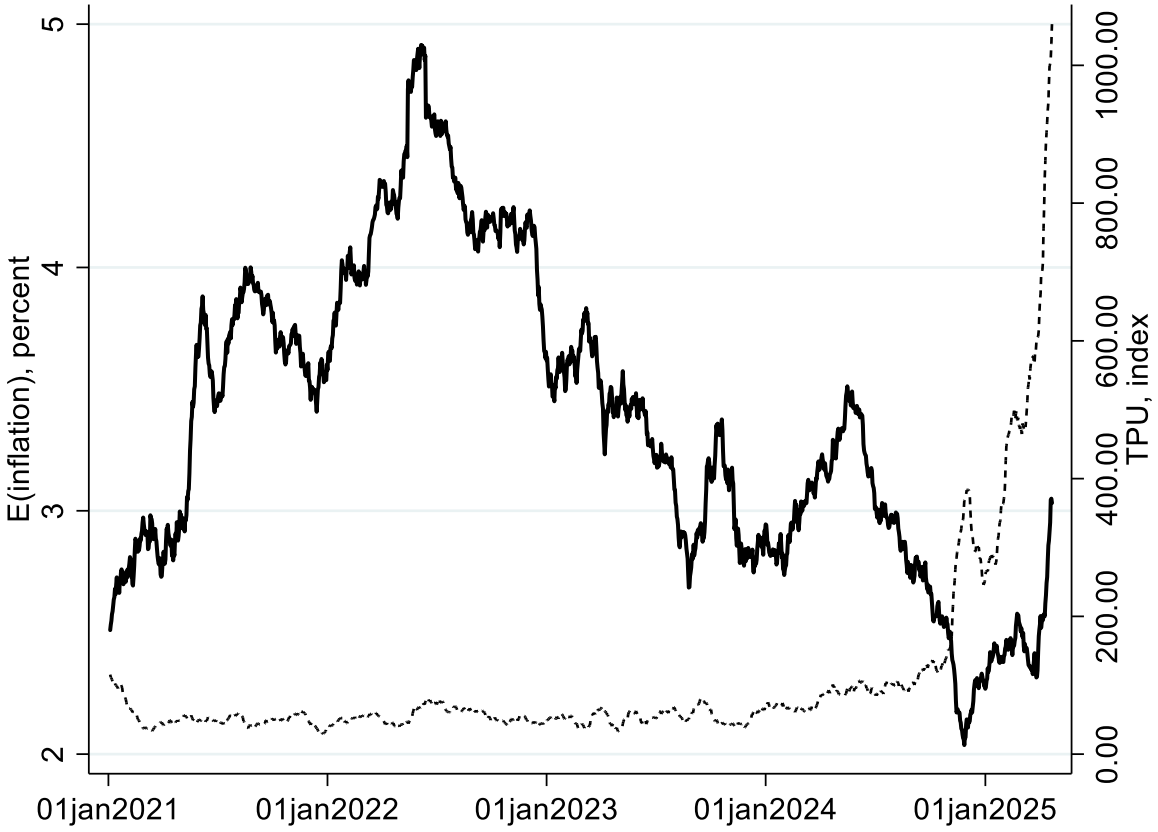
Notes: The table reports the results in specification (4). Columns (1)-(3) use expected inflation as the dependent variable. Columns (4)-(6) use 100xlog (inflation uncertainty) as the dependent variable. For each respondent, we construct a measure of inflation uncertainty as the standard deviation of the reported distribution. Columns (1) and (4) reports estimates for the full sample (2020-2025). Columns (2) and (5) report estimates for the subsample before the presidential election (November 6th, 2024), while columns (3) and (6) report estimates for the subsample after the presidential election. We use Huber robust regression to downweigh the importance of outliers and influential observations. Standard errors are reported in parentheses. ***, **, * denote statistical significance at 1, 5 and 10 percent levels.

Table 2: Effects of Trade Policy Uncertainty on Spending

	Dependent Variable			
	Total Spending	Services	Non Durables	Durables
	(1)	(2)	(3)	(4)
Panel A. Full Sample				
Inflation Expectations	0.028***	0.002	-	-
	(0.005)	(0.005)	-	-
Plan Spending	0.713***	0.702***	-	-
	(0.002)	(0.003)	-	-
Observations	102,000	77,878	-	-
Adj. R-squared	0.760	0.734	-	-
Kleibergen-Paap F-stat. first st.	2,011.6	1736,9	-	-
p-value LM statistics	0.000	0.000	-	-
Kleibergen-Paap rk LM test	509.6	442.5	-	-
Hansen J statistic	35.2	44.3	-	-
p-value J statistic	0.000	0.000	-	-
Panel B. Pre-election Sample				
Inflation Expectations	0.028***	0.011**	0.162***	0.106**
	(0.004)	(0.005)	(0.026)	(0.048)
Plan Spending	0.712***	0.698***	0.506***	0.577***
	(0.002)	(0.003)	(0.011)	(0.010)
Observations	89,935	66,183	7,933	6,390
Adj. R-squared	0.763	0.736	0.443	0.528
Kleibergen-Paap F-stat. first st.	2,362.5	2,214.2	198.8	73.2
p-value LM statistics	0.000	0.000	0.000	0.000
Kleibergen-Paap rk LM test	638.9	607.6	51.5	18.6
Hansen J statistic	109.2	47.0	14.7	4.6
p-value J statistic	0.000	0.000	0.000	0.000
Panel C. Post-election Sample				
Inflation Expectations	-0.053***	-0.058***	-	-
	(0.009)	(0.011)	-	-
Plan Spending	0.734***	0.718***	-	-
	(0.004)	(0.006)	-	-
Observations	14,989	11,685	-	-
Adj. R-squared	0.734	0.699	-	-
Kleibergen-Paap F-stat. first st.	656.3	519.333	-	-
p-value LM statistics	0.000	0.000	-	-
Kleibergen-Paap rk LM test	176.7	139.7	-	-
Hansen J statistic	28.1	24.5	-	-
p-value J statistic	0.000	0.000	-	-

Notes: This table reports instrumental variable estimates of the estimations of the Euler equation. The first-stage estimation uses the specification that includes political views, trade policy uncertainty index, and the interaction among them. Panel B reports estimates for the subsample before the presidential election (November 6th, 2024), while Panel C reports estimate for the subsample after the presidential election. All specifications control for socio and demographic characteristics and 1-year ahead GDP growth expectations. Huber weights are used to downplay the importance of outliers. Standard errors are reported in parentheses. All ***, **, * denote statistical significance at 1, 5 and 10 percent levels.

Figure 1. Trade Policy Uncertanty and Inflation Expectations



Notes: Inflation expectations are the implied mean of the distributional question about one-year-ahead inflation expectations from the Cleveland Fed's daily survey of households. All time series are 30-day moving averages. Trade Policy Uncertainty (TPU) Index comes from Caldara et al. (2020). TPU Index is built by counting the frequency of joint occurrences of trade policy and uncertainty terms across major newspapers.