

# Monetary Policy Effects on Firms' Inflation Uncertainty\*

Gabriela López-Noria  
Banco de México

Mathieu Pedemonte  
IADB

July 17, 2025

**Abstract:** We study how monetary policy affects inflation uncertainty. Using a survey of Mexican firms and exploiting quasi-random variation in the response date, we estimate the effect of a monetary policy decision and surprise on firms' perceived inflation uncertainty. We find that a one percentage point contractionary monetary policy reduces inflation uncertainty by 0.02 percentage points. We explore how this result is affected by levels of higher and lower aggregate uncertainty. We find that monetary policy tightening is twice as effective in reducing inflation uncertainty in periods of higher economic uncertainty, such as trade uncertainty. Our findings highlight the role of monetary policy in reducing inflation uncertainty. We discuss that in periods of uncertainty, monetary authorities face a trade-off between stimulating the economy and increasing uncertainty about the inflation outlook.

**JEL classifications:** E31; D80; D84; E52

**Keywords:** Inflation uncertainty, Firms' expectations, Monetary policy, Survey data

---

\*We thank Joel Castillo for excellent research assistance. "The data was accessed through the EconLab at Banco de Mexico. The EconLab collected and processed the data as part of its effort to promote evidence-based research and foster ties between Banco de Mexico's research staff and the academic community. Inquiries regarding the terms under which the data can be accessed should be directed to econlab@banxico.org.mx." The views expressed here are solely those of the authors and do not necessarily reflect the views of the IDB or the Bank of Mexico. Emails: glopezn@banxico.org.mx, mathieupe@iadb.org.

# 1 Introduction

“For the time being, we are well positioned to wait to learn more about the likely course of the economy before considering any adjustments to our policy stance.”

Jerome Powell, June 24, 2025

Economic uncertainty strongly affects households and firms’ decisions, which also affects economic growth (Bloom, 2009; Kumar et al., 2023; Coibion et al., 2024; Baker et al., 2023). While many papers have focused on the effect of uncertainty on economic outcomes and the origins of uncertainty, there is less evidence on how policies can reduce agents’ uncertainty. Additionally, communication about monetary policy has been suggested as a way to guide economic agents and communicate uncertainty (Coibion et al., 2020). Monetary policy decisions, however, can likewise be a strong and efficient way to influence agents’ uncertainty. The effects of monetary policy on uncertainty can be particularly important in developing economies, where sources of uncertainty can be external and highly disruptive.

This paper uses quasi-random variation to study how monetary policy actions and news affect firms’ expected inflation uncertainty. We use the Monthly Survey of Regional Economic Activity conducted by the Central Bank of Mexico (henceforth Banxico’s Regional Survey), a panel survey that asks firms to provide scenarios for inflation over the next 12 months with the probability of occurrence that they would assign to each of them. With the survey, we can measure firms’ inflation uncertainty in Mexico on a monthly basis by measuring the implied standard deviation over the inflation scenarios and probabilities at the firm level. The survey receives answers within a month, so some firms answer before and others after a monetary policy meeting. We build symmetric 5-day windows around monetary policy decisions and use variation in the date of response to see how firms’ inflation uncertainty changes after a monetary policy decision.

We test whether firms that answer the survey before and after the meeting are similar. We find no differences in their observable characteristics, as well as in their pre-meeting inflation uncertainty. When we compare their level of uncertainty before and after the meeting, we find no differences in their responses. We then explore how the direction

and size of the monetary policy decision affect their uncertainty. We find that contractionary monetary policy shocks significantly affect firms' expected inflation uncertainty. A 25-basis point surprise monetary policy tightening reduces firms' inflation uncertainty significantly by 0.5 percentage points. Additionally, the effect is robust to the inclusion of specific firm controls, as well as firm fixed effects.

We then explore how this effect interacts with the global economic environment. In particular, we investigate whether the effect found is amplified when aggregate uncertainty increases, measured as economic and trade risk. We find that monetary policy actions are more effective in reducing uncertainty in situations of higher aggregate uncertainty. In particular, when trade risks, domestic or aggregate, are one standard deviation higher, a surprise monetary policy tightening has twice as much of the average effect on uncertainty. This effect is robust to a very specific firm control that accounts for other aspects of the economic environment. We find a similar but less robust effect for aggregate level of uncertainty measured by the VIX.

This finding highlights the importance of monetary policy in periods of high aggregate uncertainty. Low inflation periods are generally less volatile than high inflation periods, as inflation usually does not reach negative territory. Because of that, a monetary policy tightening tends to reduce inflation uncertainty. In periods of aggregate risk and inflationary pressures, taking decisive actions to reduce inflation reassures respondents that inflation will not increase, reducing inflation uncertainty.

We then explore heterogeneous effects by firm. We explore whether firms that are more exposed to trade react strongly or not to monetary policy actions. We find that, in periods of high inflation uncertainty, firms that import inputs react strongly to monetary policy reactions. In these cases, the effect of monetary policy reactions is 2.5 times larger than the average effect of monetary policy actions. This result shows that monetary policy actions are especially relevant for firms exposed to the source of uncertainty.

Our findings show that central banks face a trade-off in periods of high aggregate uncertainty, such as the COVID-19 pandemic or the recent tariff war. While monetary policy actions can have a direct effect in mitigating the potential effects on output, it can also in-

crease the fear of uncontrolled inflation. Monetary policy easing increases the chances of higher inflation. Our results indicate that surprising monetary policy easing increase inflation uncertainty of firms, that this effect is larger when there is higher aggregate uncertainty, and that firms directly exposed are affected the most. Monetary policy authorities should account for those risks appropriately.

These results are particularly relevant given the recent developments for advanced as well as developing economies. Recent tariff uncertainty is affecting many advanced and emerging economies, in particular Mexico. The inflationary effect of tariffs depends on the monetary policy reaction ([Auclert et al., 2025](#); [Bianchi and Coulibaly, 2025](#); [Monacelli, 2025](#)) and in practice, recent studies have found that they increase consumer prices ([Fajgelbaum et al., 2020](#)) and inflation ([Baslandze et al., 2025](#)). This paper shows that firms increase their uncertainty more when there is more uncertainty about tariffs. Monetary authorities should appropriately weigh the positive and negative effects of monetary policy actions in those moments to avoid second-order effects.

Other works have used a similar empirical strategy. For example, [Di Pace et al. \(2025\)](#) use a similar window around monetary policy to estimate how monetary policy actions affect firms' inflation expectations and other moments of the distribution using data from the United Kingdom. [Lopez-Noria \(2025\)](#) uses a similar empirical strategy to estimate the effect of monetary policy actions and surprises in Mexico, finding that monetary policy surprises effectively reduce inflation expectations. As in [Lopez-Noria \(2025\)](#), we use monetary policy surprises and a narrow window around the monetary policy decision to estimate the effect of monetary policy. Our identification assumption relies on quasi-random variation of firms' date of response. We provide several tests to show that firms that answer before or after the monetary policy meeting in a 5-day window around the decision are observationally the same and present similar results.

When exploring aggregate uncertainty, we use different variables related to uncertainty in Mexico and global uncertainty. We characterize uncertainty with the economic policy uncertainty index for Mexico built by [Baker et al. \(2016\)](#); the VIX, a measure of stock market volatility in the United States; and a world trade uncertainty index built by

[Caldara et al. \(2020\)](#). We find that the initial direct effect doubles its size when trade uncertainty is one standard deviation larger. This result highlights monetary policy's role in reducing uncertainty about the inflationary scenarios.

This paper contributes to the growing literature that studies economic uncertainty's effect on economic agents' decisions and actions. [Bloom \(2009\)](#) show that higher uncertainty negatively affects firms' hiring and investment decisions, reducing economic activity. [Coibion et al. \(2024\)](#) use a randomized control trial (RCT) to generate exogenous variation on the macroeconomic uncertainty of European households. They find that higher uncertainty reduces consumers' spending on nondurable goods and services, as well as on holiday packages and luxury goods. Similarly, [Georgarakos et al. \(2024\)](#) rely on information treatments randomly assigned to firms in New Zealand to generate exogenous variation in firms' macroeconomic uncertainty. They find that higher uncertainty i) leads them to reduce employment, prices, and investment; ii) makes them less likely to invest in new technologies, to seek out new export markets or new loans, or to develop new facilities; and iii) reduces their sales.

We also contribute to the literature on the drivers and effects of macroeconomic uncertainty ([Binder et al. \(2025\)](#)). [Baker et al. \(2023\)](#) show that exogenous uncertainty shocks negatively affect economic activity. [Binder et al. \(2025\)](#) find that inflation uncertainty, measured as the dispersion of professional inflation forecasts, reduces industrial production and increases inflation. Using firm-level data, [Yotzov et al. \(2023\)](#) investigate the impact of inflation uncertainty on firm performance, particularly on profit margins and productivity. They find that inflation uncertainty has increased since 2021, expanding across all economic sectors and negatively impacting firms' profit margins and productivity. [Kumar et al. \(2023\)](#) analyze the effect of macroeconomic uncertainty on firms' decisions and choices. They find that higher macroeconomic uncertainty reduces their prices, employment, and investment. [Kostyshyna and Petersen \(2024\)](#) find that a decrease in uncertainty about inflation leads to more household spending and non-durable spending.

[Londono et al. \(2024\)](#) investigate the effect of inflation uncertainty on investment, industrial production, and consumption between 1960 and 2023 in the United States. They

find that a four-standard deviation shock in inflation uncertainty leads to a 0.7 percent decline in industrial production, a 2.5 percent decrease in investment, and a positive, moderate, and short-lived effect on consumption. This last finding on consumption disappears once they exclude the COVID-19 episode from the sample, which suggests positive interactions with the fiscal stimulus implemented during the pandemic.

The rest of the paper is organized as follows. In Section 2 we describe the data and empirical strategy. In Section 3 we show the direct effect of monetary policy on inflation uncertainty. In Section 4 we show how these results are influenced by different levels of aggregate uncertainty and discuss our results. Finally, in Section 5 we conclude.

## 2 Data and Empirical Strategy

We use data from Banxico’s Regional Survey.<sup>1</sup> In February 2020, Banxico added a new module to its Regional Survey to collect data on firms’ 12-month inflation expectations. The questionnaire follows the standard of many firms’ surveys of expectations, as it asks for an open question related to the national consumer price index and does not have any priming or additional information that influences the answers (Coibion et al., 2020). Additionally, it has national representativeness.

This survey adds additional questions to evaluate different inflationary scenarios. In particular, a group of randomly selected firms are asked about five possible inflation scenarios. The lowest, low, moderately possible, high, and highest possible. For each scenario, the respondents must give a numerical answer and a probability of occurrence. With those scenarios and probabilities, we can measure the standard deviation of the responses. In particular, we obtain:

---

<sup>1</sup>Due to the nature of the information, it is important to note that this Survey is representative of establishments with more than 100 workers in the manufacturing and non-manufacturing sectors (comprising construction, commerce and services, except educational and health services) at the regional level.

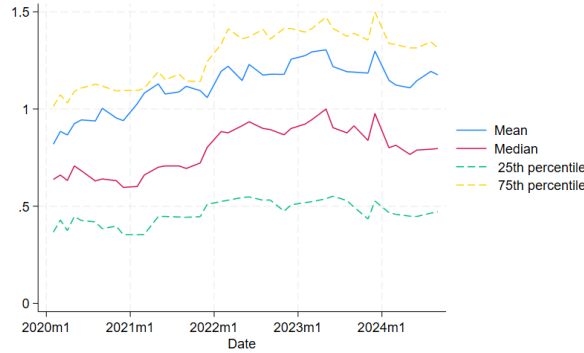
$$\sigma(\pi^e)_{it} = \sqrt{\sum_{q=1}^5 Pr_{q,i,t} \times (\pi_{q,i,t}^e - \bar{\pi}_{i,t})^2} \quad (1)$$

with

$$\bar{\pi}_{i,t} = \sum_{q=1}^5 (\pi_{q,i,t}^e \times Pr_{q,i,t})$$

where  $\pi_{q,i,t}^e$  is the numerical inflation forecast for firm  $i$ , at time  $t$  for the scenario  $q$  that can be either the lowest (1), low (2), moderately possible (3), high (4) and highest possible (5).  $Pr_{q,i,t}$  is the probability for the scenario  $q$  that a firm  $i$  assigns at time  $t$ . We use  $\sigma(\pi^e)_{it}$  as the measure of firm uncertainty. Figure 1 shows the uncertainty distribution and how it evolves over time.

Figure 1: Distribution of Inflation Uncertainty over Time



**Note:** This figure shows the time series of inflation uncertainty of Mexican firms in our sample, as measured in equation 1. The blue line shows the average across firms; the red line, the median; the green dashed line, the 25th percentile; and the yellow dashed line, the 75th percentile.

Mexican firms' inflation uncertainty was relatively stable between 2020 and 2024. We see an increase in uncertainty in 2022 when inflation increased globally, but this increase was mainly for the upper bound of the distribution.

This survey is conducted monthly. In order to identify the effect of monetary decisions, we use quasi-experimental variation in the timing of the answer. In particular, as in [Di Pace et al. \(2025\)](#), we consider windows of 5 days before and after a monetary policy

meeting. Then, we compare answers before and after the meeting. This empirical strategy relies on firms getting randomly allocated to each side of the window. Firms can randomly select around the meeting for at least two reasons. One is because firms always answer on the same day, and it happens to be before or after a monetary policy meeting, and another is because firms choose a random date every month. In both cases, the decision of the firm to answer the survey would not be a function of the meeting, and we should have similar characteristics of firms before and after the meeting. However, only in the case that firms choose a random date every month, would we be able to control for firms' fixed effects.

We first show that firms are observationally similar independently of when they answer the question. Table 1 shows firms' characteristics in both groups. We test the differences and do not find statistical differences for firms answering before or after the meeting in terms of sector, size, region, or previous uncertainty. Table 1 shows that firms in both groups are observationally similar. This finding suggests that we can use quasi-random variation on the date firms answered the survey.

Table 1: Differences in Observables between Firms Answering before and after the Meeting

	Pre-meeting	Post-meeting	P-value
Sector			0.272
Manufacturing	0.460	0.476	
Non Manufacturing	0.540	0.524	
Size			0.987
101-250 employees	0.334	0.338	
251-500 employees	0.251	0.250	
501-1000 employees	0.163	0.163	
More than 1000 employees	0.252	0.248	
Region			0.150
North	0.250	0.245	
Center North	0.227	0.228	
Center	0.342	0.368	
South	0.180	0.159	
Previous Uncertainty	1.055	1.127	0.178

**Note:** This table shows the average characteristics of the sample of firms before and after the meeting and within the 5-day window built in this paper. In the case of sector, size and region, we show the share of firms in each category for each pre-meeting and post-meeting group. The column p-value, shows the value from a chi-squared test. In the case of previous uncertainty, it shows the one month lagged uncertainty for each group. The p-value column shows the result from a t-test.

Additionally, we use a measure of a monetary policy shock to evaluate whether firms react differently to a contractionary or expansionary monetary policy action. As firms might anticipate that decision, we use monetary policy surprises. In particular, we follow [Solís \(2023\)](#) and [Solís \(2023\)](#) to construct a measure of monetary surprises as the change in 3-month swap rates in 30-minute windows around Banxico's monetary policy decisions. These windows start 10 minutes before the monetary policy announcement and end 20

minutes after.

### 3 Monetary Policy Effect on Uncertainty

In this section we explore the effect of a monetary policy decision on firms' inflation uncertainty. We exploit quasi-random variation in the day firms answer the survey in a 5-day window around the monetary policy decision. As we showed in the previous section, firms answering before and after the meeting are observationally equivalent. Specifically, we run the following regression:

$$\sigma(\pi^e)_{it} = \alpha_t + \beta \times I(1 = after)_{i,t} + \gamma \times I(1 = after)_{i,t} \times MPS_t + \varepsilon_{it}, \quad (2)$$

where  $I(1 = after)_{i,t}$  is an indicator that takes a value of 1 if firm  $i$  answered after the monetary policy meeting within the window around a monetary policy decision  $t$  and 0 if it answered before, but during window  $t$ .  $MPS_t$  is the monetary policy shock.  $\alpha_t$  is a time window-specific fixed effect.

This regression allows us to measure the effect of uncertainty of the meeting by itself ( $\beta$ ) and the effect of the size of the monetary policy decision  $\gamma$ . Later, we will incorporate other interactions with aggregate uncertainty variables. Table 2 shows the results of regression 2.<sup>2</sup>

---

<sup>2</sup>In Table 4 in Appendix A.1, we add additional controls related to expectations and find that the effect is in general robust to this inclusion. The announcement can affect both mean and uncertainty, which is why our preferred specification does not include the actual action. Additionally, some firms can respond systematically the same day, which is why our preferred specification controls for past uncertainty and not for individual fixed effects.

Table 2: Inflation Uncertainty and Monetary Policy Shocks

	(1)	(2)	(3)	(4)
$I(1 = after)_{i,t}$	0.061 (0.040)	0.075** (0.036)	0.005 (0.027)	0.013 (0.027)
$I(1 = after)_{i,t} \times MPS_t$		-0.018** (0.006)	-0.016** (0.008)	-0.012*** (0.004)
$\sigma(\pi^e)_{i,t-1}$				0.136 (0.100)
Time FE	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes
Observations	4775	4775	4675	3912
R2	0.001	0.002	0.003	0.066

**Note:** This table shows results from regression 2. The dependent variable is inflation uncertainty.  $I(1 = after)_{i,t}$  is an indicator that takes a value of 1 if firm  $i$  answered after the monetary policy meeting within window  $t$  and 0 if it answered before, but during window  $t$ .  $MPS_t$  is the monetary policy shock.  $\sigma(\pi^e)_{i,t-1}$  is the uncertainty of the firm in the previous month. We use Driscoll-Kraay clustered standard errors.

The results of Table 2 show that the meeting alone does not have a strong effect on inflation uncertainty. Only in Column (2) do we find a significant effect of the meeting, independently of the decision, on uncertainty. The coefficient is positive, but not statistically significant. When we interact it with the monetary policy decisions, we find that the effect is negative and statistically significant. This finding implies that a monetary policy tightening reduces uncertainty. In particular, a one percentage point surprise monetary policy contraction reduces uncertainty by 0.02 percentage points. The effect is similar when we control for individual fixed effects.

This effect is robust to including firm fixed effects and the lagged uncertainty that the firm had in the previous month. We can see that the effect is not only significantly different

from zero but also of similar magnitude in each specification.

This result indicates that monetary policy can indeed influence inflation uncertainty. Monetary policy actions not only have effects on the average inflation, as [Di Pace et al. \(2025\)](#) and [Lopez-Noria \(2025\)](#) have shown, but also affect second moments. This finding has important economic implications, as some studies have shown that uncertainty can have an adverse effect on economic decisions ([Kumar et al., 2023](#); [Coibion et al., 2024](#); [Kostyshyna and Petersen, 2024](#)). In that sense, monetary policy authorities have a trade-off between the direct effect of monetary policy decisions on inflation expectations and their indirect impact on uncertainty. This second effect might be more prevalent in periods of high aggregate uncertainty when uncertainty about the economy might influence more economic decisions. In the next section, we explore how the main effect we found interacts with aggregate uncertainty.

## 4 Aggregate Uncertainty and Discussion

We next turn to examining how aggregate uncertainty interacts with this effect. The idea is to explore whether certain levels of aggregate uncertainty influence the effect of monetary policy. We estimate the following specification to assess this effect:

$$\sigma(\pi^e)_{i,t} = \alpha_t + \beta \times I(1 = after)_{i,t} + \gamma \times I(1 = after)_{i,t} \times MPS_t + \delta \times I(1 = after)_{i,t} \times \theta_t^j + \eta \times I(1 = after)_{i,t} \times MPS_t \times \theta_t^j + \varepsilon_{i,t} \quad (3)$$

where  $\theta_t^j$  stands for either one of the following measures of aggregate uncertainty. We use several measures of aggregate uncertainty related to different sources of uncertainty. First, we consider Mexico's economic policy uncertainty index (*MEPU*). *MEPU* is a text-based uncertainty measure built by [Baker et al. \(2016\)](#). It reflects the frequency of newspaper articles containing terms related to Mexico's economy, its regulations or laws, government institutions, the policies implemented or proposed, and uncertainty.

Second, we consider  $VIX$ , an aggregate uncertainty measure constructed using the implied volatilities of the S&P 500 index options. It is considered a measure of the volatility of global financial markets.<sup>3</sup>

Finally, we also consider the trade policy uncertainty index ( $TPU$ ) developed by [Cal-dara et al. \(2020\)](#). It is built by counting the “joint occurrences of trade policy and uncertainty terms across major newspapers” worldwide.

With that information, we run specification 3 with each of those variables one at a time. Each variable is normalized to zero in terms of standard deviations, so the interaction of the monetary policy dummy and the monetary policy surprise will show the additional effect that a monetary policy surprise has in periods of one standard deviation high or low uncertainty. All regressions consider a meeting fixed effect. This means that, given a level of aggregate uncertainty, we see whether the decision changes that level. Our main estimate  $\theta_t^j$  measures the effect within meeting. Table 3 shows the results.

---

<sup>3</sup>For more details see: [https://www.cboe.com/tradable\\_products/vix/](https://www.cboe.com/tradable_products/vix/).

Table 3: Effect of Monetary Policy on Uncertainty in Periods of High Uncertainty

	(1)	(2)	(3)
$I(1 = after)_{i,t}$	0.072*** (0.025)	0.081** (0.034)	0.060* (0.019)
$I(1 = after)_{i,t} \times MPS_t$	-0.020*** (0.007)	-0.019** (0.007)	-0.026*** (0.003)
$I(1 = after)_{i,t} \times \theta_t^j$	-0.010 (0.032)	-0.034** (0.016)	-0.008 (0.026)
$I(1 = after)_{i,t} \times MPS_t \times \theta_t^j$	-0.018** (0.007)	-0.015* (0.007)	-0.016*** (0.004)
Time FE	Yes	Yes	Yes
Uncertainty Measure	MEPU	VIX	TPU
Observations	4775	4775	4775
R2	0.003	0.003	0.004

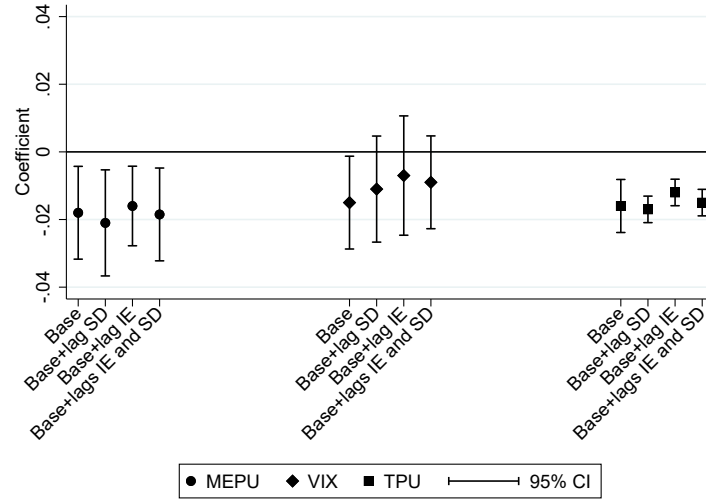
**Note:** This table shows results from regression 3. The dependent variable is inflation uncertainty.  $I(1 = after)_{i,t}$  is an indicator that takes a value of 1 if firm  $i$  answered after the monetary policy meeting within window  $t$  and 0 if it answered before, but during window  $t$ .  $MPS_t$  is the monetary policy shock.  $\theta_t^j$  is the measure of aggregate uncertainty. We use Driscoll-Kraay clustered standard errors.

Table 3 shows that when uncertainty is one standard deviation higher than the average level, measured by the MEPU, VIX or TPU, the effect of a monetary policy tightening in reducing uncertainty is higher. In particular, the effect is almost twice as relevant than when there is an average level of uncertainty. Similarly, in periods when aggregate uncertainty is one standard deviation lower than average, the effect of monetary policy tightening is almost non-relevant.

In this set of results we interact the effects with aggregate characteristics that can also be affecting other characteristics of firms. Figure 2 shows the triple interaction ( $I(1 =$

$after)_{i,t} \times MPS_t \times \theta_t^j$ ) in versions of the model where we control for past uncertainty and past and current inflation expectations. We see that while the effects for VIX are lower and lose significance in some specifications, the effects are generally robust to these time-varying firm-specific controls.

Figure 2: Triple Interaction Coefficient with Controls

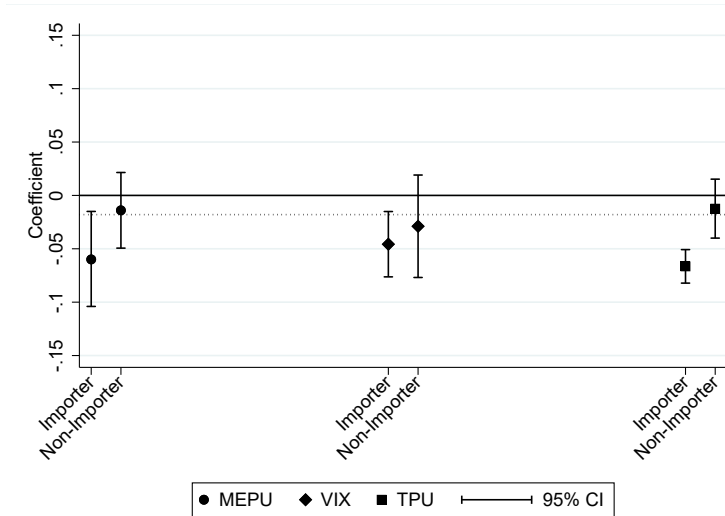


These results show that when uncertainty is high, monetary authorities face a trade-off: on one hand, easing monetary policy can help to alleviate the direct effects of uncertainty, but on the other, monetary policy easing can increase uncertainty, as our results indicate. This could be due to the fact that some of those scenarios are inflationary and the fact that the monetary authority is not primarily addressing that could worry some firms.

This effect is particularly relevant for trade uncertainty, a phenomenon that affects the Mexican economy and that usually does not result from internal decisions. We can see that when trade uncertainty is higher, the effect of monetary policy contractions is almost twice as large. Trade shocks can be contractionary, but also inflationary, for example, in the case of tariffs ([Monacelli, 2025](#)). These findings highlight an even more complicated scenario for monetary policy authorities. [Coibion et al. \(2025\)](#) show that consumers expect tariffs to be inflationary. Their findings as well as ours suggest that, if monetary policy tries to accommodate monetary policy shocks, inflation uncertainty can increase in a scenario where inflationary pressures are perceived to be high by economic agents.

Table 3 and Figure 2 show that trade uncertainty seems to be a consistent source of uncertainty that makes monetary policy more effective. We then explore whether firms that are more exposed to trade do react stronger to policy reactions during periods of higher uncertainty. To do so, we rely on a survey question that asks if firms directly import some of their inputs. Then, we run regression (3), but interacting the parameters with a variables that is 1 if the firm imports inputs and zero otherwise. Then, in figure 3 we plot the total reaction of firms to monetary policy surprises ( $MPS_t = 1$ ) in periods of one standard deviation high aggregate uncertainty ( $\gamma + \eta$ ), separating the effects for importers and non-importers. The coefficients plotted all come from the same regression, so tests between parameters are comparable.

Figure 3: Effect on High Aggregate Uncertainty for Importers and Non-Importers



The figure shows that in general in period of high uncertainty we see higher coefficients than the unconditional effect, represented by the dash line. We can also see that this higher effect is mainly driven by firms that import goods. Firms that do not import tend to have a higher coefficient to the unconditional effect, even in periods of high aggregate uncertainty. Finally, we can see that importers have a higher and statistically different effect when the shock is associate to higher global uncertainty. This result highlights how monetary policy can be specially effective for firms that might be more directly impacted by the source of uncertainty.

## 5 Conclusion

This paper explores how monetary policy decisions affect the inflation uncertainty of economic agents. We find that surprise monetary policy tightening reduces inflation uncertainty significantly when we compare firms answering before and after the monetary policy meeting. We do not find statistically significant effects of the meeting by itself, highlighting the importance of the direction of the decision and not the decision by itself.

Additionally, we find that this effect is higher in periods of higher aggregate uncertainty. Monetary policy actions are almost twice as effective in reducing inflation uncertainty when aggregate uncertainty is high, especially trade uncertainty. We find that this effect is particularly important for firms that are involved in the source of uncertainty, for example, in the case of firms that import inputs, when aggregate uncertainty is high.

Other works have shown that uncertainty has a negative effect on spending and economic activity. The findings of our paper show a trade-off that policymakers face, especially in periods of high aggregate uncertainty: easing monetary policy can boost economic activity, but that boost can be reduced as uncertainty also increases. We show that this trade-off is more prevalent in periods of high inflation uncertainty.

This trade-off is particularly relevant in events that have characterized the economy recently. For example, during the COVID-19 pandemic, aggressive monetary and fiscal expansion worried some economic agents about the possibility of higher inflation. On the other side, during the ongoing trade war that affected Mexico in particular, having an excessively expansionary monetary policy has the risk of increasing inflationary uncertainty to a point that can affect economic activity.

## References

- Auclert, A., Rognlie, M., and Straub, L. (2025). The macroeconomics of tariff shocks. Technical report, National Bureau of Economic Research.
- Baker, S. R., Bloom, N., and Davis, S. J. (2016). Measuring Economic Policy Uncertainty.

- The Quarterly Journal of Economics*, 131(4):1593–1636.
- Baker, S. R., Bloom, N., and Terry, S. J. (2023). Using disasters to estimate the impact of uncertainty. *The Review of Economic Studies*, 91(2):720–747.
- Baslandze, S., Fuchs, S., Pringle, K., and Sparks, M. D. (2025). Tariffs and consumer prices. *Federal Reserve Bank of Boston Research Paper Series Current Policy Perspectives Paper*, 25(2).
- Bianchi, J. and Coulibaly, L. (2025). The optimal monetary policy response to tariffs. Technical report, National Bureau of Economic Research.
- Binder, C., Ozturk, E., and Sheng, X. S. (2025). The effects of inflation uncertainty on firms and the macroeconomy. *Journal of International Money and Finance*, 151:103239.
- Bloom, N. (2009). The impact of uncertainty shocks. *econometrica*, 77(3):623–685.
- Caldara, D., Iacoviello, M., Molligo, P., Prestipino, A., and Raffo, A. (2020). The economic effects of trade policy uncertainty. *Journal of Monetary Economics*, 109:38–59.
- Coibion, O., Georgarakos, D., Gorodnichenko, Y., Kenny, G., and Weber, M. (2024). The effect of macroeconomic uncertainty on household spending. *American Economic Review*, 114(3):645–677.
- Coibion, O., Gorodnichenko, Y., Kumar, S., and Pedemonte, M. (2020). Inflation expectations as a policy tool? *Journal of International Economics*, 124:103297.
- Coibion, O., Gorodnichenko, Y., and Weber, M. (2025). The upcoming trump tariffs: What americans expect and how they are responding. Technical report, Working Paper.
- Di Pace, F., Mangiante, G., and Masolo, R. M. (2025). Do firm expectations respond to monetary policy announcements? *Journal of Monetary Economics*, 149:103648.
- Fajgelbaum, P. D., Goldberg, P. K., Kennedy, P. J., and Khandelwal, A. K. (2020). The return to protectionism. *The Quarterly Journal of Economics*, 135(1):1–55.

- Georgarakos, D., Gorodnichenko, Y., Coibion, O., and Kenny, G. (2024). The causal effects of inflation uncertainty on households' beliefs and actions. Technical report, National Bureau of Economic Research.
- Kostyshyna, O. and Petersen, L. (2024). The effect of inflation uncertainty on household expectations and spending. Technical report, National Bureau of Economic Research.
- Kumar, S., Gorodnichenko, Y., and Coibion, O. (2023). The effect of macroeconomic uncertainty on firm decisions. *Econometrica*, 91(4):1297–1332.
- Londono, J. M., Ma, S., and Wilson, B. A. (2024). The unseen cost of inflation: Measuring inflation uncertainty and its economic repercussions. *Available at SSRN 4856339*.
- Lopez-Noria, G. (2025). Central banks' monetary policy announcements and firms' inflation expectations: Evidence from Mexico. Technical report, Working Paper.
- Monacelli, T. (2025). Tariffs and monetary policies.
- Solís, P. (2023). Do central bank words matter in emerging markets? evidence from Mexico. *Journal of Macroeconomics*, 78:103570.
- Solis, P. (2023). Does the exchange rate respond to monetary policy in Mexico? solving an exchange rate puzzle in emerging markets. *Journal of Money, Credit and Banking*, 55(8):2093–2113.
- Yotzov, I., Anayi, L., Bloom, N., Bunn, P., Mizen, P., Öztürk, Ö., and Thwaites, G. (2023). Firm inflation uncertainty. In *AEA Papers and Proceedings*, volume 113, pages 56–60. American Economic Association 2014 Broadway, Suite 305, Nashville, TN 37203.

# A Appendix

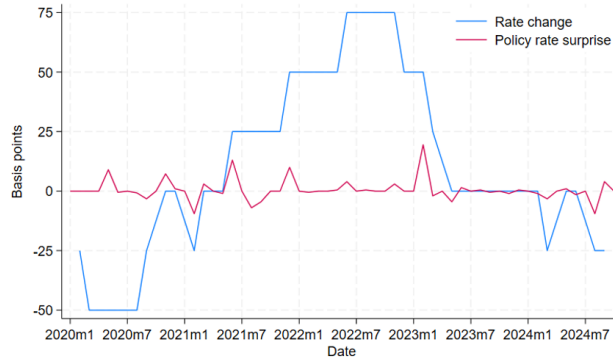
## A.1 Other Tables

Table 4: Inflation Uncertainty and Monetary Policy Shocks

	(1)	(2)	(3)	(4)
$I(1 = after)_{i,t}$	0.008 (0.020)	0.010 (0.020)	0.020 (0.016)	0.022 (0.017)
$I(1 = after)_{i,t} \times MPS_t$	-0.009** (0.005)	-0.010** (0.004)	-0.008* (0.004)	-0.008* (0.004)
$\sigma(\pi^e)_{i,t-1}$		0.063 (0.065)	0.068 (0.055)	0.092 (0.067)
$\pi_{i,t-1}^e$	0.132*** (0.024)	0.114*** (0.025)		0.279*** (0.017)
$\pi_{i,t}^e$			0.250*** (0.017)	-0.059** (0.018)
Time FE	Yes	Yes	Yes	Yes
Individual FE	Yes	Yes	Yes	Yes
Observations	3912	3912	3912	3912
R2	0.136	0.147	0.457	0.467

**Note:** This table shows results from regression 2. The dependent variable is inflation uncertainty.  $I(1 = after)_{i,t}$  is an indicator that takes a value of 1 if the firm  $i$  answered after the monetary policy meeting within window  $t$  and 0 if it answered before, but during window  $t$ .  $MPS_t$  is the monetary policy shock.  $\sigma(\pi^e)_{i,t-1}$  is the uncertainty of the firm in the previous month.  $\pi_{i,t}^e$  is firm's  $i$  expected value of inflation at time  $t$ , while  $\pi_{i,t-1}^e$  is the lag of this previous variable. We use Driscoll-Kraay standard errors.

Figure 4: Monetary Policy Shock and Policy Rate



## A.2 Monetary Policy Shock

The monetary policy shock is built as the change in 3-month swap rates in 30-minute windows bracketing Banco de México's monetary policy announcements (Solis, 2023). According to (Solis, 2023), this change in 3-month swap rates captures surprises about both the current level of the policy rate and its future path since it covers more than one policy meeting. Solis (2023) uses 3-month swap rates to measure the monetary policy surprise since those instruments are the most liquid swaps referencing the 28-day interbank interest rate (TIIE28D), which closely follows the policy rate. In addition, the correlation between this shock and a measure built as the difference between the change in the policy rate and the average of survey expectations from Bloomberg is above 0.9% (Solis, 2023). Monetary policy shocks using 1-month swap rates would not capture surprises about the future path of the policy rate, since they have a shorter history and are less liquid (Solis, 2023), but they correlate with the measures using 3-month swap rates.

Figure 4 plots raw changes in the policy rate and the the monetary policy surprise. As most decisions are anticipated, the measured shock is relatively smaller compared to the actual changes in the policy rate.