Monetary Policy Effects on Firms' Uncertainty

Gabriela López-Noria
Banco de México

Mathieu Pedemonte
IADB

We study how monetary policy affects inflation uncertainty. Using a survey of Mexican firms and quasi-random variation in response dates, we find that a one-percentage-point contractionary monetary policy surprise reduces firms' inflation uncertainty by 0.02 percentage points. We also find that the effect of monetary policy tightening is twice as large in periods of higher aggregate uncertainty, such as trade uncertainty. We discuss how, during such periods, monetary authorities may face a trade-off between stimulating the economy and reducing uncertainty about the inflation outlook.

JEL classifications: E31; D80; D84; E52
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1 Introduction

Economic uncertainty affects households' and firms' decisions, which in turn affects economic growth (Bloom, 2009; Kumar et al., 2023; Coibion et al., 2024; Baker et al., 2024). A large literature has focused on the sources of uncertainty and their effects on economic outcomes. Among these studies, unconventional monetary policy tools have been suggested as a way to guide economic agents' expectations about future policies (Coibion et al., 2020), thereby shaping decision-making in uncertain times. However, conventional monetary policy instruments and actions can likewise guide agents and influence their uncertainty regarding key macroeconomic variables. These effects can be more important in developing economies, where sources of uncertainty are often external and highly disruptive.

This paper uses quasi-random variation to study how monetary policy actions and news affect firms' 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 in which firms report multiple inflation scenarios for the next 12 months together with the probability they assign to each scenario. Using this information, we measure firms' inflation uncertainty on a monthly basis as the implied standard deviation of the reported inflation distribution at the firm level.

Survey responses are collected throughout the month, so some firms answer before and others after a monetary policy meeting. We construct symmetric five-day windows around monetary policy decisions and exploit variation in firms' response dates to identify how inflation uncertainty changes following a policy decision.

To validate our empirical strategy, we test whether firms responding before and after the monetary policy meeting are comparable. We find no differences in observable characteristics or in pre-meeting inflation uncertainty. Given these results, we use the response date to test whether monetary policy decisions affect firms' inflation uncertainty. We also find no statistically significant differences in uncertainty between firms responding before and after the meeting on average when considering the policy decision alone.

We then explore how the direction and size of the monetary policy action affect firms'

uncertainty. To do so, we follow Bauer and Swanson (2023a) and construct a measure of monetary policy surprises for Mexico using changes in the three-month swap rate within a 30-minute window around the policy announcement. We further remove any anticipatory effects using observable macroeconomic and financial variables from Mexico and abroad. The resulting variable captures unanticipated monetary policy changes. We interact these monetary policy surprises with the post-meeting indicator to estimate the effect of monetary policy on firms' inflation uncertainty.

We find that contractionary monetary policy surprises significantly reduce firms' expected inflation uncertainty. Comparing firms that responded before the meeting with those that responded afterward, we find that an unanticipated 25 basis point monetary policy tightening reduces firms' inflation uncertainty by approximately 0.4 percentage points. This effect is robust to the inclusion of firm fixed effects and controls for firms' past reported uncertainty.

We next explore how this effect interacts with the economic environment. In particular, we examine whether the effect of monetary policy surprises is amplified during periods of elevated aggregate uncertainty, measured by (1) domestic economic and policy uncertainty, (2) financial uncertainty, and (3) trade uncertainty. We find that monetary policy actions are more effective at reducing inflation uncertainty when aggregate uncertainty is higher. Specifically, when domestic uncertainty or trade uncertainty is one standard deviation above its mean, the effect of a contractionary monetary policy surprise is approximately twice as large. This result is robust to specifications controlling for firms' past expectations. We find a similar, though less robust, pattern for financial uncertainty.

We also explore heterogeneous effects at the firm level. In particular, we examine whether firms more exposed to trade react more strongly to monetary policy actions during periods of high uncertainty. We find that, in periods of elevated trade uncertainty, firms that import intermediate inputs directly respond more strongly to monetary policy surprises in terms of their inflation uncertainty. In these cases, the effect of monetary policy surprises is almost twice as large as for firms that do not import inputs. This finding suggests that monetary policy actions are more relevant for firms directly exposed to the

source of uncertainty.

Our results indicate that conventional monetary policy tightening is effective in reducing firms' inflation uncertainty. Because inflation rarely falls into negative territory and inflation expectations tend to be positive (Gorodnichenko and Sergeyev, 2021), disinflationary actions may reduce uncertainty by limiting upside inflation risks. By contrast, especially during periods of high uncertainty, expansionary monetary policy can increase inflationary risks, thereby raising inflation uncertainty. This asymmetry helps explain why contractionary monetary policy actions are more effective at reducing inflation uncertainty, particularly for firms exposed to the underlying source of uncertainty.

Our findings imply that central banks face an important trade-off during periods of high aggregate uncertainty, such as the COVID-19 pandemic or recent trade tensions. While monetary policy actions can mitigate negative effects on output, they may also increase concerns about uncontrolled inflation. In particular, unexpected monetary policy easing raises firms' inflation uncertainty, an effect that is stronger when aggregate uncertainty is high and among firms directly exposed to the source of uncertainty. Monetary policy authorities should account for these risks when designing and communicating policy actions.

Literature Review: The results found are relevant given recent developments in both advanced and developing economies. Rising trade policy uncertainty has affected many countries, including Mexico. The inflationary effects of tariffs depend critically on the monetary policy response (Auclert et al., 2025; Bianchi and Coulibaly, 2025; Monacelli, 2025). Empirically, recent studies find that tariffs increase consumer prices (Fajgelbaum et al., 2020) and inflation (Baslandze et al., 2025). Our results show that firms' inflation uncertainty responds more strongly to monetary policy actions when trade uncertainty is elevated, highlighting the importance of appropriately weighing the costs and benefits of policy interventions during such periods.

Other studies employ empirical strategies similar to ours, but focusing on other outcomes. For example, Di Pace et al. (2025) use a narrow window around monetary policy announcements to estimate how policy actions affect firms' inflation expectations and

other moments of the distribution using data from the United Kingdom. Lopez-Noria (2025) apply a comparable approach to Mexico and find that monetary policy surprises significantly reduce inflation expectations. As in Lopez-Noria (2025), we exploit monetary policy surprises and quasi-random variation in firms' response dates within a narrow window around policy decisions. Our identification assumption relies on the quasi-random timing of survey responses. We provide several tests showing that firms responding before and after monetary policy meetings within a five-day window are observationally similar and exhibit comparable pre-meeting outcomes.

We use multiple measures capturing both domestic and global sources of uncertainty. Specifically, we use the Economic Policy Uncertainty index for Mexico developed by Baker et al. (2016), the VIX as a measure of financial market volatility in the United States, and the World Trade Uncertainty Index constructed by Caldara et al. (2020). We find that the direct effect of monetary policy surprises on inflation uncertainty approximately doubles when trade uncertainty is one standard deviation above its mean. This finding underscores the role of monetary policy in shaping inflation-related uncertainty, particularly during periods of heightened global risk.

This paper contributes to the broader literature on the effects of economic uncertainty on agents' decisions. The seminal work of Bloom (2009) shows that heightened uncertainty reduces firms' hiring and investment, leading to lower economic activity. Our contribution highlights the role of monetary policy in mitigating uncertainty and, by extension, dampening these negative real effects.

Using firm-level data in a randomized controlled trial setting, Georgarakos et al. (2024) show that higher uncertainty reduces firms' employment, pricing, and investment. Similarly, Kumar et al. (2023) find that elevated macroeconomic uncertainty lowers firms' prices, employment, and investment. Hajdini et al. (2025a) show that uncertainty shocks propagate through input–output networks, amplifying the effects of idiosyncratic shocks. On the household side, Kostyshyna and Petersen (2024) and Coibion et al. (2024) find that increases in uncertainty reduce consumer spending.

A related strand of the literature examines how uncertainty affects the transmission

of monetary policy. Bloom et al. (2007) show that firms become less responsive to policy interventions when uncertainty is high. In contrast, Aruoba et al. (2024) show that higher expected uncertainty increases price stickiness, potentially enhancing the effectiveness of monetary policy. Focusing on financial markets, Lakdawala and Moreland (2023) show that monetary policy announcements reduce firm-level uncertainty, measured using option-implied volatility, by resolving pre-announcement uncertainty. While their analysis captures market participants' uncertainty about firms, our results indicate that monetary policy decisions alone do not significantly reduce managers' inflation uncertainty; instead, unanticipated policy actions play a central role, particularly during periods of elevated aggregate uncertainty. Other related work, such as Husted et al. (2020), studies the effects of monetary policy uncertainty on macroeconomic outcomes.

We also contribute to the literature on the drivers and effects of macroeconomic and inflation uncertainty (Binder et al., 2025). Baker et al. (2024) show that exogenous uncertainty shocks reduce economic activity, while Binder et al. (2025) find that inflation uncertainty—measured as the dispersion of professional forecasts—lowers industrial production and raises inflation. Using firm-level data, Yotzov et al. (2023) study the impact of inflation uncertainty on firm performance and find that rising inflation uncertainty since 2021 has reduced profit margins and productivity across sectors. Finally, Londono et al. (2024) examine the effects of inflation uncertainty on investment, industrial production, and consumption in the United States

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, which aims to measure firms' economic performance and expectations in Mexico. Since 2017, the survey has followed approximately

one thousand firms with more than 100 employees. In February 2020, Banxico added a new module to the survey to collect information on firms' 12-month inflation expectations. The questionnaire follows the standard design of many firm-level expectations surveys: it asks an open-ended question about the national consumer price index and does not include priming or additional information that could influence responses (Coibion et al., 2020). In addition, the survey is nationally representative.

Within the expectations module, a randomly selected group of firms is asked to report five possible inflation scenarios: the lowest, low, moderately possible, high, and highest possible outcomes. For each scenario, respondents provide both a numerical inflation rate and an associated probability of occurrence. Using these scenarios and probabilities, we measure firms' inflation uncertainty as the standard deviation of the implied subjective inflation distribution. Specifically, we compute:

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

with

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

where $\pi^e_{q,i,t}$ 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, with $\sum_q Pr_{q,i,t} = 1 \; \forall \; i, t$. We use $\sigma(\pi^e)_{it}$ as the measure of firm uncertainty. Figure A.1 in Online Appendix A.2 shows the uncertainty distribution and how it evolves over time. Mexican firms' inflation uncertainty remained relatively stable between 2020 and 2024. We observe an increase in uncertainty in 2022, coinciding with the global rise in inflation; however, this increase is driven primarily by the upper tail of the distribution.

The survey is conducted monthly. To identify the effects of monetary policy decisions, we exploit quasi-experimental variation in the timing of firms' responses. Specifically,

following Di Pace et al. (2025), we construct symmetric five-day windows around monetary policy meetings and compare responses submitted before and after each meeting. We select this window, rather than using all observations, to have firms exposed to similar information. This empirical strategy relies on firms being quasi-randomly allocated to either side of the window.

Firms may or may not select their response dates for reasons that are independent of the monetary policy meeting. We first focus on cases in which firms do not choose their response dates based on the meeting's timing. In this case, some firms may consistently respond on the same calendar day each month, so their responses may happen to fall before or after a given meeting. Other firms may randomly choose a different response date each month. In both cases, the firm's decision to respond to the survey is unrelated to the timing of the monetary policy meeting. As a result, firms responding before and after the meeting should have similar observable and unobservable characteristics. However, only when firms choose different response dates each month can we exploit within-firm variation and use firm fixed effects. In these cases, firms are quasi-randomly allocated across treatment and control groups, yielding a balanced comparison.

We first verify that firms are observationally similar regardless of when they respond to the survey. Table 1 reports summary statistics for firms within our five-day window that answered before or after the meeting. We test for differences across groups and find no statistically significant differences in sector, size, region, or pre-meeting inflation uncertainty. These results indicate that firms responding before and after the meeting are observationally comparable.

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.

These findings indicate that firms responding before and after the meeting are similar, supporting the validity of the comparison between the two groups. Nevertheless, it remains possible that firms with certain unobservable characteristics systematically choose to respond after specific meetings. While we show that this is not the case for observable characteristics, we further address potential selection related to anticipated policy information by constructing a measure of monetary policy surprises for Mexico that accounts

for a wide set of observable macroeconomic and financial variables. Using this measure, we estimate the effect of unanticipated monetary policy actions on firms' inflation uncertainty by comparing firms that are observationally equivalent.

Specifically, we employ an orthogonalized measure of monetary policy surprises for Mexico (MPS), based on Lopez-Noria (2025) and following the methodology of Bauer and Swanson (2023b). The orthogonalized MPS builds on a conventional high-frequency measure constructed by Solís (2023) as the change in three-month swap rates within a 30-minute window around Banxico's monetary policy announcements (from 10 minutes before to 20 minutes after the announcement). Recent evidence (Bauer and Swanson, 2023a,b; Miranda-Agrippino and Ricco, 2021; Cieslak, 2018) shows that conventional high-frequency MPS measures may capture both unexpected policy actions and information shocks. We estimate the following regression:

$$MPS_t = \alpha + \beta X_{t-} + u_t \tag{2}$$

where t indexes Banxico's monetary policy announcements and X_{t-} is a vector of macroeconomic and financial variables known before Banxico's monetary policy meeting. The X_{t-} vector includes GDP, inflation, and peso-US dollar exchange rate surprises, defined as deviations between realized outcomes and mean expectations from Banxico's monthly Survey of Professional Forecasters.[1] In addition, we include the 13-week change in the Bloomberg Commodity Index (BCOM), the 13-week change in the slope of Mexico's yield curve (10-year minus 3-month), changes in the US Federal Funds rate, and US industrial production index. The orthogonalized MPS is then obtained as the residual:

$$MPS_t^{\perp} = MPS_t - \hat{\alpha} - \hat{\beta} X_{t-} \tag{3}$$

where $\hat{\alpha}$ and $\hat{\beta}$ are the estimated coefficients of regression (2). All macroeconomic and financial variables are standardized prior to estimation. Throughout the paper, we use

[1] See Bush and Noria (2021) for details on the GDP surprise construction since they account for the quarterly frequency of GDP releases.

this orthogonalized MPS as our measure of monetary policy surprises. This measure plausibly removes much of the anticipated information that firms might incorporate, both about the Mexican economy and global conditions. In addition, all empirical specifications include meeting fixed effects, so identification relies on within-meeting variation in response timing.

3 Monetary Policy Effect on Uncertainty

In this section, we explore the effect of monetary policy decisions on firms' inflation uncertainty. We exploit quasi-random variation in the day firms respond to the survey within a five-day window around each monetary policy meeting. As shown in the previous section, firms responding before and after the meeting are observationally equivalent. Specifically, we estimate the following regression:

$$\sigma(\pi^e)_{it} = \alpha_t + \beta \times I(1 = after)_{i,t} + \gamma \times I(1 = after)_{i,t} \times MPS_t + \varepsilon_{it}, \tag{4}$$

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. α_t is a time window-specific fixed effect.

This regression allows us to separately identify the effect of the monetary policy meeting itself on firms' inflation uncertainty (β) and the effect of the magnitude of the monetary policy surprise (γ). We include window-specific fixed effects, which control for all information common to firms within each meeting window. The construction of the surprise measure is designed to remove information that varies within the window, thereby isolating the unanticipated component of monetary policy.

In some specifications, we also include firm fixed effects. This allows us to exploit within-firm variation, which is possible for firms that respond both before and after a meeting or across different monetary policy surprises over time. Table 2 shows the results

of regression 4.[2]

Table 2: Inflation Uncertainty and Monetary Policy Shocks

	(1)	(2)	(3)	(4)
$I(1 = after)_{i,t}$	0.061	0.061**	-0.008	0.003
	(0.040)	(0.031)	(0.027)	(0.028)
$I(1 = after)_{i,t} \times MPS_t$		-0.019**	-0.016**	-0.012***
		(0.008)	(0.007)	(0.004)
$\sigma(\pi^e)_{i,t-1}$				0.136
				(0.092)
Time FE	Yes	Yes	Yes	Yes
Individual FE	No	No	Yes	Yes
Observations	4775	4775	4775	4001
R^2	0.015	0.017	0.586	0.699

Note: This table shows results from regression 4. 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 in Table 2 show that the monetary policy meeting itself does not have a strong effect on firms' inflation uncertainty. Only in Column (2) do we find a statistically significant effect of the meeting, independently of the policy decision. The estimated coefficient is positive but small.

[2]In Table A.1 in Online Appendix A.1, we add additional controls related to inflation expectations lagged and current. We find that the effect is, in general, robust to this inclusion. As some firms can respond systematically the same day, we prefer specification controls for past uncertainty and not for individual fixed effects.

When we interact the meeting indicator with monetary policy surprises, we find a negative and statistically significant effect. This result implies that monetary policy tightening reduces firms' inflation uncertainty. In particular, a one-percentage-point contractionary monetary policy surprise reduces inflation uncertainty by between 0.012 and 0.019 percentage points, depending on the specification. This finding is robust to the inclusion of firm fixed effects and to controlling for firms' past reported uncertainty.

These results indicate that monetary policy can influence firms' inflation uncertainty. Monetary policy actions not only affect average inflation, as shown by Di Pace et al. (2025) and Lopez-Noria (2025), but also shape higher moments of the inflation distribution. This finding has important economic implications, as several studies document that uncertainty adversely affects economic decisions (Kumar et al., 2023; Coibion et al., 2024; Kostyshyna and Petersen, 2024). In this sense, monetary policy authorities face a trade-off between the conventional effects of policy decisions on inflation and inflation expectations and their indirect impact on uncertainty. When large shocks occur, such as during the recent pandemic, weighing potential inflationary risks may be particularly relevant for keeping expectations anchored (Hajdini et al., 2025b). In the next section, we examine how the main effect 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 levels of aggregate uncertainty influence the effect of monetary policy on firms' inflation uncertainty. We estimate the following specification to assess this effect:

$$\sigma(\pi^e)_{i,t} = \alpha_t + \beta \times I(1 = after)_{i,t} + \gamma \times I(1 = after)_{i,t} \times MPS_t + \delta \times I(1 = after)_{i,t} \times \theta_t^j + \eta \times I(1 = after)_{i,t} \times MPS_t \times \theta_t^j + \varepsilon_{i,t} \tag{5}$$

where θ_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. Finally, we also consider the trade policy uncertainty index (TPU) developed by Caldara et al. (2020). It is built by counting the "joint occurrences of trade policy and uncertainty terms across major newspapers" worldwide.

Using this information, we estimate specification 5 separately for each aggregate uncertainty measure. Each variable is standardized to have mean zero and unit standard deviation, so the interaction between the monetary policy dummy and the monetary policy surprise captures the additional effect of a policy surprise when aggregate uncertainty is one standard deviation above or below its mean. All regressions include meeting fixed effects. This implies that, conditional on the level of aggregate uncertainty, identification relies on within-meeting variation to assess how monetary policy actions affect firms' inflation uncertainty. Our coefficient of interest is η, which measures how the effect of monetary policy surprises varies with aggregate uncertainty. Table 3 shows the results.

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

	(1)	(2)	(3)
$I(1 = after)_{i,t}$	0.054***	0.069**	0.040**
	(0.019)	(0.030)	(0.019)
$I(1 = after)_{i,t} \times MPS_t$	-0.023***	-0.023***	-0.027***
	(0.008)	(0.007)	(0.003)
$I(1 = after)_{i,t} \times \theta_t^j$	-0.030	-0.037***	-0.020
	(0.028)	(0.014)	(0.027)
$I(1 = after)_{i,t} \times MPS_t \times \theta_t^j$	-0.024***	-0.026**	-0.016***
	(0.007)	(0.012)	(0.004)
Time FE	Yes	Yes	Yes
Uncertainty Measure	MEPU	VIX	TPU
Observations	4,775	4,775	4,775
R^2	0.018	0.017	0.018

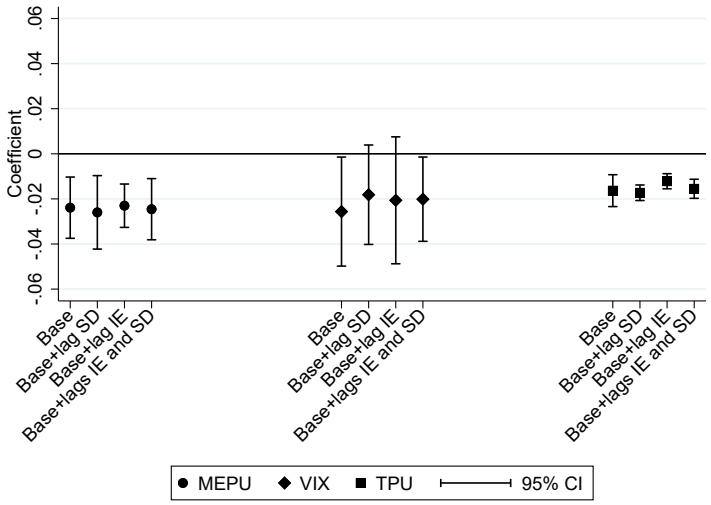
Note: This table shows results from regression 5. The dependent variable is inflation uncertainty. $I(1 = after)_{i,t}$ is an indicator that takes a value of 1 if firm i answered after the monetary policy meeting within window t and 0 if it answered before, but during window t. MPS_t is the monetary policy shock. θ_t^j is the measure of aggregate uncertainty. We use Driscoll-Kraay clustered standard errors.

Table 3 shows that when aggregate uncertainty is one standard deviation higher than its average level, as measured by the MEPU, VIX, or TPU, the effect of monetary policy tightening on reducing firms' inflation uncertainty is stronger. In particular, the effect is almost twice as large as when uncertainty is at its average level. By contrast, in periods

when aggregate uncertainty is one standard deviation below average, the effect of monetary policy tightening is close to zero.

Other firms' characteristics can also be influenced by the aggregate level of uncertainty. Because of that, we run versions of the model where we control for past uncertainty and past and current inflation expectations. Figure 1 shows the triple interaction ($I(1 = after)_{i,t} \times MPS_t \times \theta_t^j$) in those versions of the model, showing that the results are generally robust to time-varying firm-specific controls. Especially in periods of higher local economic and political uncertainty (MEPU) and higher global trade uncertainty (TPU), a monetary policy tightening is more effective in reducing firms' inflation uncertainty.

Figure 1: Triple Interaction Coefficient with Controls



Note: This figure shows the effect of coefficient θ_t^j in regression (5), using alternative sets of controls for the different aggregate uncertainty measures, as described in the text. Table A.2 in Online Appendix A.1 shows the results of those regressions.

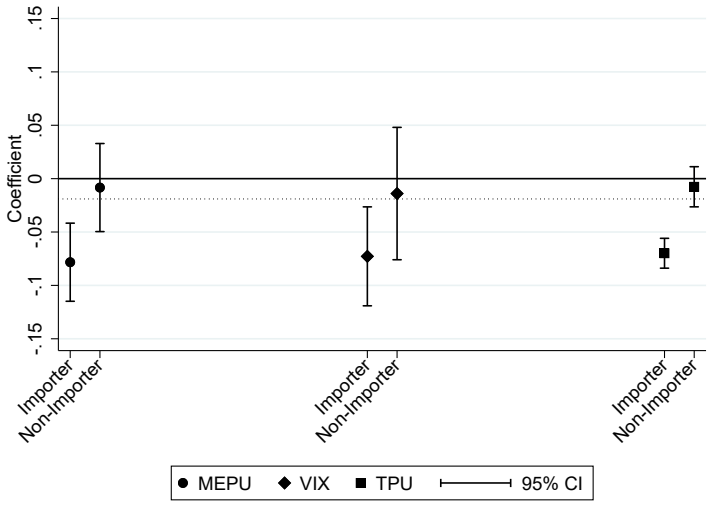
These results show that when uncertainty is high, monetary policy authorities face a stronger trade-off compared to the one described before. Easing monetary policy may help mitigate the direct negative effects of uncertainty on economic activity, but it may also increase inflation uncertainty. This may occur because some uncertainty scenarios are inflationary, and the perception that the monetary policy authority is not directly addressing inflationary risks may raise concerns among firms' managers.

This effect is especially relevant in the context of trade uncertainty, a phenomenon that

strongly affects the Mexican economy and is typically driven by external factors rather than domestic policy decisions. We find that when trade uncertainty is elevated, the effect of monetary policy tightening on reducing inflation uncertainty is almost twice as large. Trade shocks can be contractionary but can also be inflationary, as in the case of tariffs (Auclert et al., 2025; Monacelli, 2025). Our findings point to an even more complex environment for monetary policy authorities, especially when these policies are perceived as inflationary (Coibion et al., 2025). When inflationary pressures are perceived to be high, accommodative monetary policy may increase inflation uncertainty rather than stabilize expectations.

Table 3 and Figure 1 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 react more strongly 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 (5), but interacting the parameters with a variable that is 1 if the firm imports inputs and zero otherwise. Then, in figure 2 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 2: Effect on High Aggregate Uncertainty for Importers and Non-Importers



Note: This figure shows the effect of coefficient θ_t^j in regression (5), interacted with a variable indicating whether the firm imports or not, using different controls for different variables of aggregate volatility as described in the text. Table A.3 in Online Appendix A.1 shows the results of those regressions.

The figure shows that, in general, during periods of high aggregate uncertainty, the estimated coefficients are larger than the unconditional effect, represented by the dashed line. We also observe that this stronger effect is mainly driven by firms that import goods. Firms that do not import tend to exhibit coefficients closer to the unconditional effect, even during periods of elevated aggregate uncertainty. Finally, we find that firms that import inputs display a larger and statistically significant response when the monetary policy shock is associated with higher global uncertainty. This result highlights that monetary policy can be particularly effective for firms that are more directly exposed to the underlying 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 significantly reduces inflation uncertainty when comparing firms that respond before and after monetary policy meetings. By contrast, we do not find statistically significant effects of the meeting itself,

highlighting the importance of the direction and magnitude of the policy action rather than the occurrence of the meeting per se.

In addition, we find that this effect is stronger during periods of elevated aggregate uncertainty. Monetary policy actions are almost twice as effective in reducing inflation uncertainty when aggregate uncertainty is high, especially in the case of trade uncertainty. We further show that this effect is especially pronounced for firms directly exposed to the source of uncertainty—for example, firms that import intermediate inputs during periods of high trade uncertainty.

A large body of literature documents that uncertainty negatively affects spending and economic activity. Our findings highlight a key trade-off faced by policymakers, especially in periods of high aggregate uncertainty: while monetary policy easing can stimulate economic activity, its effectiveness may be dampened if it simultaneously increases inflation uncertainty. We show that this trade-off is more salient in environments characterized by elevated inflation uncertainty.

This trade-off is particularly relevant in recent economic episodes. During the COVID-19 pandemic, for instance, aggressive monetary and fiscal expansion raised concerns among some economic agents about the risk of higher inflation. Similarly, during the recent trade tensions affecting Mexico, an excessively expansionary monetary policy may increase inflation uncertainty to a degree that ultimately weakens economic activity. These episodes illustrate the importance of accounting for uncertainty when designing and communicating monetary policy.

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