Check for updates

International Journal of Finance & Economics

WILEY

RESEARCH ARTICLE OPEN ACCESS

Explaining Episodes of High Inflation: Demand- and Supply-Side Drivers in Times of Uncertainty

Maria-Eleni K. Agoraki[1] | Nektarios Aslanidis[2] | Georgios P. Kouretas[3,4]

[1]Department of Accounting and Finance, University of the Peloponnese, Kalamata, Greece | [2]IU-RESCAT, ECO-SOC, Universitat Rovira i Virgili FEE, Avinguda Universitat 1, Reus, Spain | [3]Department of Business Administration, Athens University of Economics and Business, Athens, Greece | [4]IPAG Business School, Paris, France

Correspondence: Georgios P. Kouretas (kouretas@aueb.gr)

Received: 11 August 2025 | **Revised:** 21 April 2026 | **Accepted:** 25 April 2026

Keywords: demand-driven and supply-driven inflation | high inflation | instrumental variables | uncertainty

ABSTRACT

In this paper, we investigate the extent to which uncertainty anticipates episodes of high inflation in 30 economies worldwide. Our analysis accounts for several factors, including inflation expectations, real global economic activity, and supply chain disruptions. Using an instrumental variable (IV) approach, we identify exogenous variations in country-level uncertainty by tracking uncertainty in large global economies, which is particularly relevant for small open economies. The results indicate that periods of high uncertainty are generally associated with low inflation. Importantly, our research reveals two distinct mechanisms through which uncertainty affects inflation. Uncertainty has a negative effect on demand-driven inflation, while its effect on supply-driven inflation is positive.

JEL Classification: C50, E31, D83

1 | Introduction

During recent global disruptions, for example, the COVID-19 pandemic and Russia's invasion of Ukraine in 2022, uncertainty and inflation have generally increased in tandem. However, the relationship between uncertainty and inflation during global disruptions is complex and can vary depending on the specific circumstances. Surges in uncertainty are not always associated with inflation upswings. Figure 1 provides a visual representation of the relationship between inflation and global uncertainty. It plots the uncertainty index developed by Ahir et al. (2022) (right scale) against the US CPI inflation rate (left scale) over the past 15 years. As seen, the peak in uncertainty during the sovereign debt crisis in Europe around 2012 corresponded to decreasing inflation (of about 1.5 percentage points on average globally).

Theoretically, the impact of uncertainty on inflation is ambiguous, reflecting the complex interaction between demand and supply forces. On the demand side, uncertainty tends to dampen output and consumption. Basu and Bundick (2017) show that uncertainty shocks reduce economic activity by generating comovement with countercyclical markups under sticky prices. According to Keynesian liquidity preference theory and the precautionary savings motive, heightened uncertainty encourages individuals to save or hold liquid assets, particularly cash, reducing consumption and thus exerting downward pressure on inflation (Leduc and Liu 2016; Haque and Magnusson 2021; Grundler 2023; Furceri et al. 2024). On the supply side, price stickiness contributes to inflation persistence under uncertainty. Firms, reluctant to adjust prices frequently in volatile conditions, often engage in

During the preparation of this work, the authors used *Perplexity* for proofreading. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the paper.

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2026 The Author(s). *International Journal of Finance & Economics* published by John Wiley & Sons Ltd.

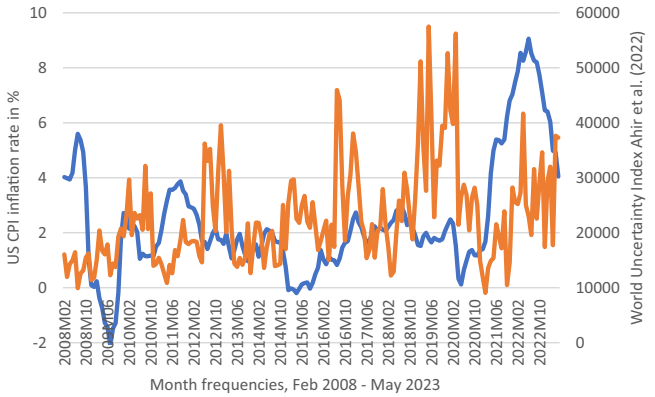


FIGURE 1 | US inflation (blue, left scale) versus World Uncertainty Index (orange, right scale). [Colour figure can be viewed at wileyonlinelibrary.com]

precautionary pricing, setting higher prices to hedge against potential shocks (Fernández-Villaverde et al. 2015; Born and Pfeifer 2021). Additionally, uncertainty can disrupt supply chains and raise production costs, further fuelling inflationary pressures (Castelnuovo 2023).

The fact that periods of uncertainty are often closely linked to inflation patterns, but with unpredictable direction, may pose considerable challenges for monetary policy (Reis 2022). Despite this, there is still limited academic research addressing how uncertainty impacts inflation, particularly in distinguishing between supply- and demand-driven inflation.

This study explores the dynamic relationship between uncertainty and inflation, using monthly data for 30 advanced economies over the period from January 2008 to May 2023. We begin our analysis by focusing on high inflation episodes, defined as periods when country-level inflation exceeds the upper quartile (Q3) of its own distribution. Studying these episodes allows us to better understand the effect of uncertainty during periods of pronounced inflationary pressure—conditions under which policy responses are often more urgent and economic agents may be particularly sensitive to uncertainty. This focus is especially relevant in light of the recent global surge in inflation, which has revived concerns about the macroeconomic consequences of elevated price levels. Uncertainty is measured using the World Uncertainty Index (WUI) by Ahir et al. (2022), which captures uncertainty related to both economic and political events across a large sample of 142 developed and developing countries.

Inflation expectations play a crucial role in shaping realized inflation rates and, consequently, significantly influence the implementation of price stability policies by central banks.[1] Therefore, our empirical analysis always controls for a measure of inflation expectations. Importantly, to further strengthen the identification of the causal effect, we employ an instrumental variable (IV) approach that allows us to isolate exogenous variations in economic uncertainty at the country level. Specifically, country-level uncertainty is instrumented by the World Uncertainty Spillover Index (WUSI), which tracks uncertainty in G7 economies plus China.

We uncover several important insights regarding the relationship between uncertainty and inflation. In general, uncertainty negatively contributes to inflation. In detail, an increase in the level of uncertainty reduces inflation growth in the short term, with the magnitude of the effect diminishing at longer horizons, thus suggesting a temporary effect. These results are robust to the use of an IV approach, as well as to the inclusion of additional controls.

When analysing the baseline model on a country-by-country basis, we observe that the deflationary impact of uncertainty is confirmed in the majority of countries, although a few exceptions exist. This finding reinforces the idea that the relationship between uncertainty and inflation can be complex and ambiguous, as it is influenced by the competing dynamics of supply-driven and demand-driven forces affecting inflation rates.

To this end, we employ an alternative measure of inflation, distinguishing between demand-driven and supply-driven components. This approach leverages a unique dataset that captures detailed information on the sub-components of inflation. This dataset, sourced from Firat and Hao (2024), categorizes expenditure items as either 'demand-affected' or 'supply-affected' across various countries. Our findings indicate that uncertainty negatively affects demand-driven inflation by diminishing both consumer and business spending. In contrast, we identify a positive effect on supply-driven inflation, where uncertainty disrupts supply chains and raises costs. This distinction is crucial for understanding the dynamics of inflation and the implications for economic policy, particularly in how central banks respond to these different inflation drivers.

The rest of the paper is organized as follows. Section 2 reviews the recent literature on inflation and inflation forecasting. In Section 3, we present our methodology. Section 4 reports and discusses the empirical findings, while Section 5 provides concluding remarks.

2 | Literature Review

This section presents a literature review on the impact of uncertainty, with a particular focus on prices. For a broader discussion on the macroeconomic effects of uncertainty, we refer to the foundational work of Bloom (2009) and the more recent contribution of Bianchi et al. (2023).

Banerjee et al. (2023) point out that the sharp rise in inflation over recent years has drawn comparisons to the high inflation experienced in the 1970s and early 1980s. Similar to that period, recent inflationary trends have been driven by supply-side shocks and, particularly in the United States, by highly accommodative fiscal and monetary policies.

Schmitt-Grohé and Uribe (2022) build on this by distinguishing between the permanent and transitory components of inflation. Their model reveals that inflation dynamics have varied significantly across historical periods. Specifically, inflation during the COVID-19 era mirrors pre-war inflation trends,

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

characterized by high volatility and frequent spikes, which tend to be short-lived.

Uncertainty can indeed have inflationary effects, as De Santis and Van der Veken (2021) demonstrate. Firms operating under conditions of price stickiness tend to set prices higher than they would in more certain environments, acting as a form of self-insurance against the risk of locking in suboptimal prices.

This inflationary effect of uncertainty is particularly relevant in the context of supply chain disruptions, as noted by Castelnuovo (2023). Supply-side shocks have been especially prominent in the post-COVID-19 period, increasing pressure on supply chains.

Chatterjee (2024) examines how increased uncertainty contributes to business cycle asymmetries across countries, emphasizing the nonlinear relationship between these shocks and financial frictions. This nonlinear interaction is critical to understanding how uncertainty is transmitted and their economic effects. The significance of these nonlinearities for our empirical approach lies in the fact that, in binary choice models, the intensity of the effect can vary based on the level of the explanatory variable—in this case, uncertainty.

Reis (2022) proposes several hypotheses to explain why central banks failed to contain the surge in inflation following the COVID-19 pandemic. A key issue, relevant to our study, is the uncertainty surrounding the nature of the shocks—whether they were temporary mark-up shocks or permanent supply shocks. Reis (2022) also points to central banks' over-reliance on their established credibility as inflation fighters and a lack of focus on the de-anchoring of inflation expectations, especially as uncertainty about the distribution of these expectations grew.

Beckmann and Czudaj (2026) explore whether the effect of uncertainty on inflation is influenced by the credibility of monetary policy and the anchoring of inflation expectations. They find that increased uncertainty leads to higher inflation, supporting the supply-side channel of uncertainty's impact. However, this effect is significantly mitigated by strong monetary policy credibility and well-anchored inflation expectations, which are key to limiting the spread of uncertainty. These findings are particularly relevant to our analysis of supply-driven inflation, where we observe that uncertainty has a slight positive effect.

The forecasting literature shows that predicting inflation trajectories, especially after the initial shock of the COVID-19 pandemic, has been highly challenging due to the significant uncertainty complicating the economic outlook. Koch and Noureldin (2023) analyse forecast errors during the post-pandemic period, revealing that inflation forecasts initially underestimated the magnitude of inflation. However, as more information became available, forecast accuracy improved, particularly in the later stages of the sample period. The authors identify four key factors contributing to the errors in core inflation forecasts for 2021: a stronger-than-expected demand recovery, demand-induced pressures on supply chains, a shift in demand from services to goods at the onset of the pandemic, and labor market tightness.

Perhaps the closest contribution to our work comes from Caldara et al. (2026), who focus on geopolitical risks and their association with higher inflation. Geopolitical risks tend to raise inflation through adverse supply-side effects, such as disruptions to supply chains, as well as through expansionary policies. Their analysis also shows that the impact of geopolitical risks on inflation varies across time and countries. Moreover, geopolitical events generate considerable uncertainty and elevate inflationary risks. These findings underscore the important relationship between geopolitical events and macroeconomic outcomes, particularly inflation, across different periods and global contexts.

3 | Data and Methodology

3.1 | Data

We compile a novel monthly dataset covering up to 30 countries in our most extensive sample, spanning the period from January 2008 to May 2023.[2] The use of monthly data provides a more granular and timely view of inflation, allowing us to better identify the causal effect.

In terms of inflation, we use monthly data on year-on-year (YoY) consumer price index (CPI) inflation from the OECD. In detail, we construct a dummy variable that is equal to one when the inflation rate in country i, month t, exceeds the upper quartile of its (country-level) distribution (Q3). The selection of the Q3 quartile threshold reflects the upper tolerance limit for inflation targeting in developed economies, beyond which the credibility of the central bank may be called into question.[3] We also collect data on sub-components of inflation, distinguishing between demand- and supply-driven inflation, with data drawn from Firat and Hao (2024). This approach based on Shapiro (2024) classifies each expenditure item for each country as 'demand-driven' or 'supply-driven' in a given period based on the signs of the residuals obtained from a VAR model of price and quantity; the same signs indicate demand-driven, while opposite signs indicate supply-driven.

We measure uncertainty using the World Uncertainty Index (WUI) by Ahir et al. (2022). The index is provided at different frequencies, including monthly, which is more granular and measures uncertainty related to both economic and political events. It is based on the number of times the word uncertainty is mentioned in the Economist Intelligence Unit country reports, scaled by the total number of words in each report.[4]

As noted above, the empirical models always include a measure of inflation expectations as a control variable at a monthly frequency. This measure is computed as 1-year-ahead inflation expectations, with data drawn from *Consensus Forecasts*.

We use additional variables as controls for robustness checks. These include an indicator of real economic activity for all industrial commodities, as a proxy for the volume of shipping in global industrial commodity markets, drawn from the global economic activity index by Kilian (2009, 2019). We also consider supply chain disruptions by means of the global supply chain pressure index (GSCPI), provided by The New York Fed (FRBNY).

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Table A1 describes the sources for all variables used in the empirical analysis.

3.2 | Econometric Specification

Empirically, we apply a dynamic binary choice model, building on seminal contributions by Estrella and Hardouvelis (1991) and Chauvet and Potter (2005), among others. To take advantage of the country-panel dimension of the data, we consider a probit panel fixed-effects instrumental variables (IV) as follows:

$$y^*_{i,t+h} = \alpha_{i,h} + \beta_h \widehat{UI}_{i,t} + \gamma_h \pi^e_{i,t} + \delta_h X_t + \epsilon_{i,t+h}$$

$$P\left(y_{i,t+h} = 1 | .\right) = F\left(\alpha_{i,h} + \beta_h \widehat{UI}_{i,t} + \gamma_h \pi^e_{i,t} + \delta_h X_t\right) \quad (1)$$

$$h = 1, \ \ldots, 12, t = 1 + h, \ \ldots, T, i = 1, \ \ldots, N.$$

where h denotes the forecast horizon h, with $h = 1, ...,12$ months ahead; $F(.)$ is the cumulative standard normal distribution; $y^*_{i,t+h}$ is the latent variable of inflation and $y_{i,t+h}$ is a $\{0, 1\}$ binary variable where 1 indicates high inflation, in country i during month $t + h$; $\widehat{UI}_{i,t}$ denotes the instrumented uncertainty in country i and month t (see next paragraph below for detailed explanation);[5] $\alpha_{i,h}$ refers to country fixed effects. Equation (1) controls for inflation expectations, where $\pi^e_{i,t}$ where indicates the country-level 1-year ahead inflation expectations. In addition to country-level control variables, we also include global-level controls, X_t, which capture common factors across all countries such as proxies for real economic activity and global value chain disruptions.

Uncertainty is influenced by both local and global factors, with global factors often playing a more significant role, especially for smaller economies. To identify the causal relationship between inflation and uncertainty, we adopt instrumental variables (IV) to Equation (1) and isolate the exogenous variation in economic uncertainty at the country level. We utilize the uncertainty levels of major economies, specifically the World Uncertainty Spillover Index (WUSI) for the G7 economies plus China, as instruments to assess local uncertainty in other countries. In this way, we capture country-level uncertainty driven by disruptions exogenous to inflationary trends within the country, thus guaranteeing by construction the validity of the instrument.

In the next step, we disentangle the effects of uncertainty and inflation expectations on inflation by employing an alternative measure that distinguishes between demand-driven and supply-driven inflation, using data from Firat and Hao (2024). In the empirical analysis, we substitute the binary high-inflation indicator in Equation (1) with two distinct inflation components, demand-driven and supply-driven, and estimate the model using a panel fixed-effects instrumental variables (IV) approach.

We report diagnostics to analyse episodes of high inflation. These diagnostics aim to provide insights into the accuracy of in-sample fit regarding both high and low inflation (specifically for the probit regressions, the frequencies of correct regime classification for high and low inflation episodes, using a 50% success cut-off) and the significance of unobserved inflation heterogeneity (fixed effects).

4 | Results

4.1 | Baseline Results

We begin our empirical analysis by estimating Equation (1), using uncertainty, inflation expectations, real economic activity and supply chain disruptions as control variables of realized high inflation episodes.[6] Table 1 reports results for different horizons h, with $h = 1, 3, 6, 9, 12$. The key finding of our instrumental variable analysis is that an increase in uncertainty has a statistically significant deflationary effect. In fact, the coefficients associated with uncertainty are negative across all horizons under analysis. This result aligns with the evidence presented by Ahir et al. (2022), where the authors show a negative relationship between output and global uncertainty. Similarly, Bettarelli et al. (2024) find a negative and transitory effect of uncertainty on green innovation.

As for the other explanatory variables included in the baseline model, inflation expectations are strongly and significantly linked to the realization of high inflation episodes. Global real economic activity and supply chain disruptions have a positive and significant effect.

Recent literature indicates significant nonlinearities in inflation responses, particularly due to the nonlinear nature of the Phillips curve (Ball and Moffitt 2021; Harding et al. 2023; Benigno and Eggertsson 2024). This suggests that the effect of uncertainty on inflation may vary in intensity depending on the level of uncertainty. Specifically, in binary choice models the marginal effect of uncertainty is given by:

$$\frac{dF\left(\alpha_{i,h} + \beta_h \widehat{UI}_{i,t} + \gamma_h \pi^e_{i,t} + \delta_h X_t\right)}{d\widehat{UI}_{i,t}} = f\left(\alpha_{i,h} + \beta_h \widehat{UI}_{i,t} + \gamma_h \pi^e_{i,t} + \delta_h X_t\right) \cdot \hat{\beta}_h \quad (2)$$

where $f(.)$ is the normal density function.

Figure 2 illustrates the marginal effects of uncertainty for each country, derived from our panel fixed-effects probit IV model. The orange line depicts the marginal effect of uncertainty, while the blue line represents the country-level uncertainty. In general, the negative effect of uncertainty on inflation increases as the level of uncertainty decreases. This result can be explained as follows: when uncertainty is low, the adverse effects on the demand side become more pronounced. These effects include reduced consumer confidence, lower levels of investment, and tighter financial conditions. Conversely, when uncertainty is high, supply-side effects become significant. These effects may include disruptions in global supply chains and the behaviour of firms that experience price stickiness. In such cases, these firms tend to delay price adjustments or set their prices higher than they would in a stable environment, as they exercise caution about changing prices amid uncertainty.

We also conduct the analysis for each country separately by using country-level uncertainty and inflation expectations.[7] Basically, we estimate time series probit models using IV for each country separately, with uncertainty and inflation expectations as the control variables. We experiment with different forecast horizons

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 1 | Binary panel fixed-effects IV model of high inflation.

Forecast horizon	Control variables	Coef β	Heterogeneity	Correct regime classification	
				High inflation	Low inflation
$h = 1$	$\widehat{UI}_{i,t}$	−2.915***	423.7	76%	97%
	$\pi^e_{i,t}$	2.234***	(1.2e−81)		
	rea_t	0.004***			
	$GSCPI_t$	0.374***			
$h = 3$	$\widehat{UI}_{i,t}$	−2.709***	331.7	75%	97%
	$\pi^e_{i,t}$	1.925***	(2.7e−62)		
	rea_t	0.005***			
	$GSCPI_t$	0.610***			
$h = 6$	$\widehat{UI}_{i,t}$	−4.586***	339.5	63%	96%
	$\pi^e_{i,t}$	1.062***	(6.4e−64)		
	rea_t	0.003***			
	$GSCPI_t$	0.676***			
$h = 9$	$\widehat{UI}_{i,t}$	−4.199***	57.36	51%	96%
	$\pi^e_{i,t}$	0.492***	(3.3e−07)		
	rea_t	0.003***			
	$GSCPI_t$	0.740***			
$h = 12$	$\widehat{UI}_{i,t}$	−3.631***	26.06	49%	96%
	$\pi^e_{i,t}$	0.084**	(0.025)		
	rea_t	0.004***			
	$GSCPI_t$	0.756***			

Note: This table shows panel probit fixed-effects IV regression results; $\widehat{UI}_{i,t}$ is the country-level measure of uncertainty index instrumented by the World Uncertainty Spillover Index ($WUSI_{i,t}$) of the G7 economies plus China, $\pi^e_{i,t}$ indicates the country-level 1-year ahead inflation expectations, rea_t indicates a global measure of real economic activity and $GSCPI_t$ is a global supply chain pressure index; The coefficient estimates of intercept are not listed; (***), (**) and (*) indicate 1%, 5% and 10% significance levels, respectively, based on robust HAC standard errors; *Heterogeneity* test for unobserved heterogeneity across countries using a likelihood ratio statistic and a χ^2 distribution (*p*-values below brackets); *Correct regime classification* are the frequencies of correct in-sample fit of high inflation episodes (left figure) versus low inflation (right figure) with success cut-off being set to 50%; The estimation period spans 2008 m^2–2023 m^5 and includes $N = 14$ countries: Australia, Austria, Canada, the Czech Republic, Germany, France, Ireland, Italy, Japan, Korea, the Netherlands, Sweden, the United Kingdom, and the United States.

($h = 1, \ldots, 12$) and settle on a forecast horizon of $h = 12$, at which we obtained the best in-sample fit in terms of the McFadden R-squared. The results are reported in Table 2. The key finding that an increase in uncertainty generally has a deflationary effect remains valid. However, for a few countries in our sample—such as Switzerland, the Czech Republic, the Netherlands, Australia, and Poland—uncertainty appears to have a positive effect on inflation, particularly for the first two countries, where the effect is highly significant. In these cases, the supply-side channel comes into play as pointed out by Castelnuovo (2023).

4.2 | Inflation Decomposition

In addition to analysing episodes of high inflation, we also consider alternative specifications that explicitly model the demand-driven and supply-driven components of inflation, following the approach of Firat and Hao (2024). These authors decompose inflation into components attributable to demand and supply factors across a broad set of countries. Such a framework enables a more efficient use of the informational content embedded in inflation data and provides a more comprehensive assessment of how uncertainty affects both demand-driven and supply-driven inflationary pressures.

The demand and supply decomposition data are available at a quarterly frequency. Accordingly, we estimate the models using quarterly data. Specifically, we aggregate the explanatory variables to quarterly averages by converting the monthly regressors into quarterly series. We then estimate a standard quarterly specification over the sample period 2008Q1–2023Q2 for forecast horizons $h = 1, 4, 8, 12$.

The analysis presented in Table 3 offers valuable insights into the relationship between uncertainty and inflation, employing a panel fixed-effects instrumental variable (IV) framework. The results reveal distinct patterns in the impact of uncertainty on demand-driven and supply-driven inflation. Specifically, uncertainty generally exerts a negative effect on demand-driven inflation, suggesting that higher uncertainty tends to suppress inflationary pressures. The estimated coefficients are statistically significant across most horizons. This finding is consistent with the economic mechanism documented by Basu and Bundick (2017), as well as with the Keynesian liquidity preference framework and the precautionary savings motive (see, for example, Furceri et al. 2024). These factors act to reduce aggregate demand, thereby placing downward pressure on prices and generating a countercyclical effect on the economy.

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

In contrast, uncertainty exhibits a positive effect on supply-driven inflation, primarily at longer horizons. On the supply side, our findings align with the notion that price stickiness plays a central role, as firms may be reluctant to adjust prices frequently in uncertain environments. As a result, firms may set higher prices to hedge against potential risks and fluctuations (Castelnuovo 2023).

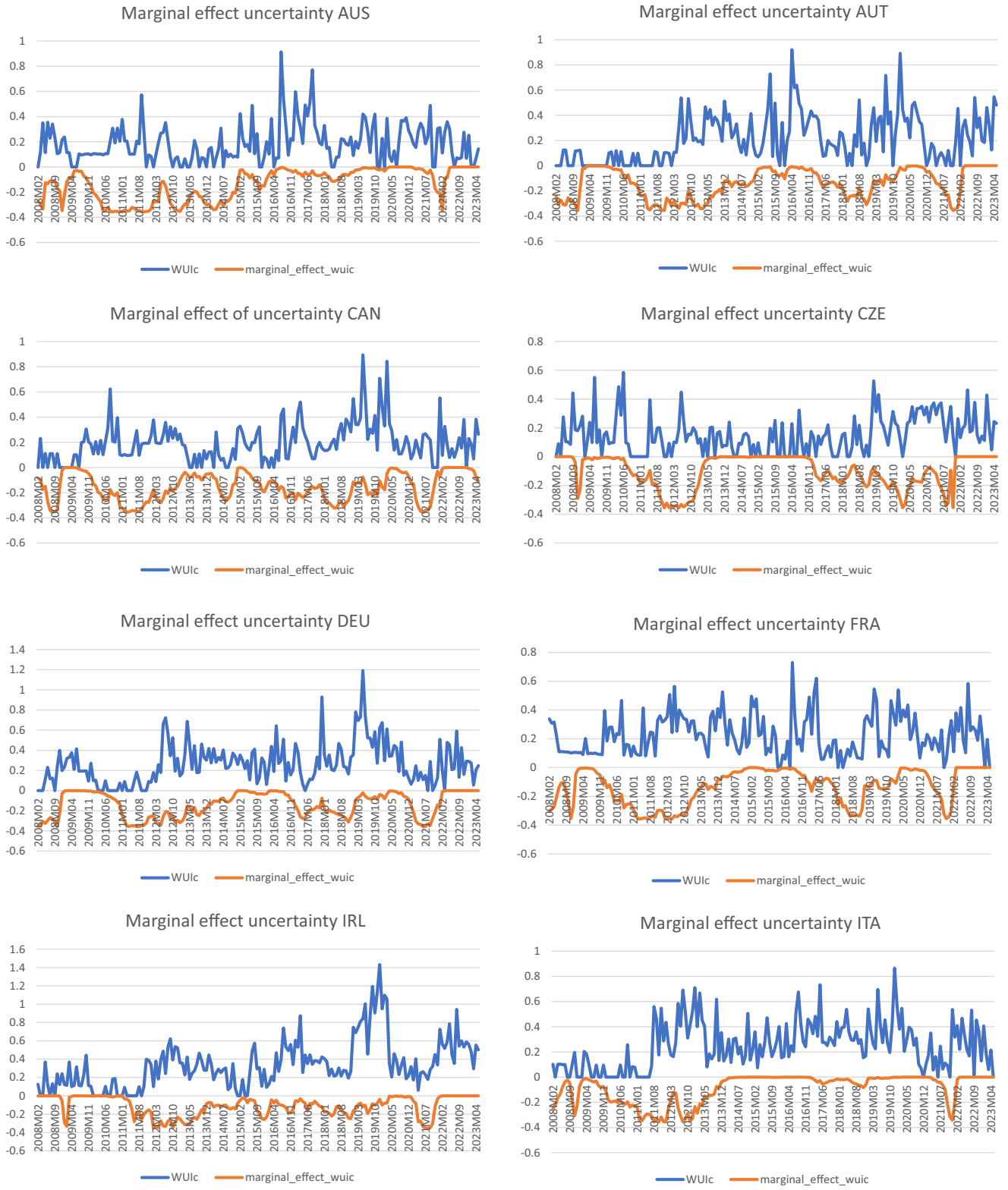


FIGURE 2 | Marginal effects of uncertainty versus uncertainty. Marginal effects of uncertainty (orange line) are derived from a binary panel fixed-effects model, using uncertainty and inflation expectations as control variables. Blue line graphs country-level uncertainty. [Colour figure can be viewed at wileyonlinelibrary.com]

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

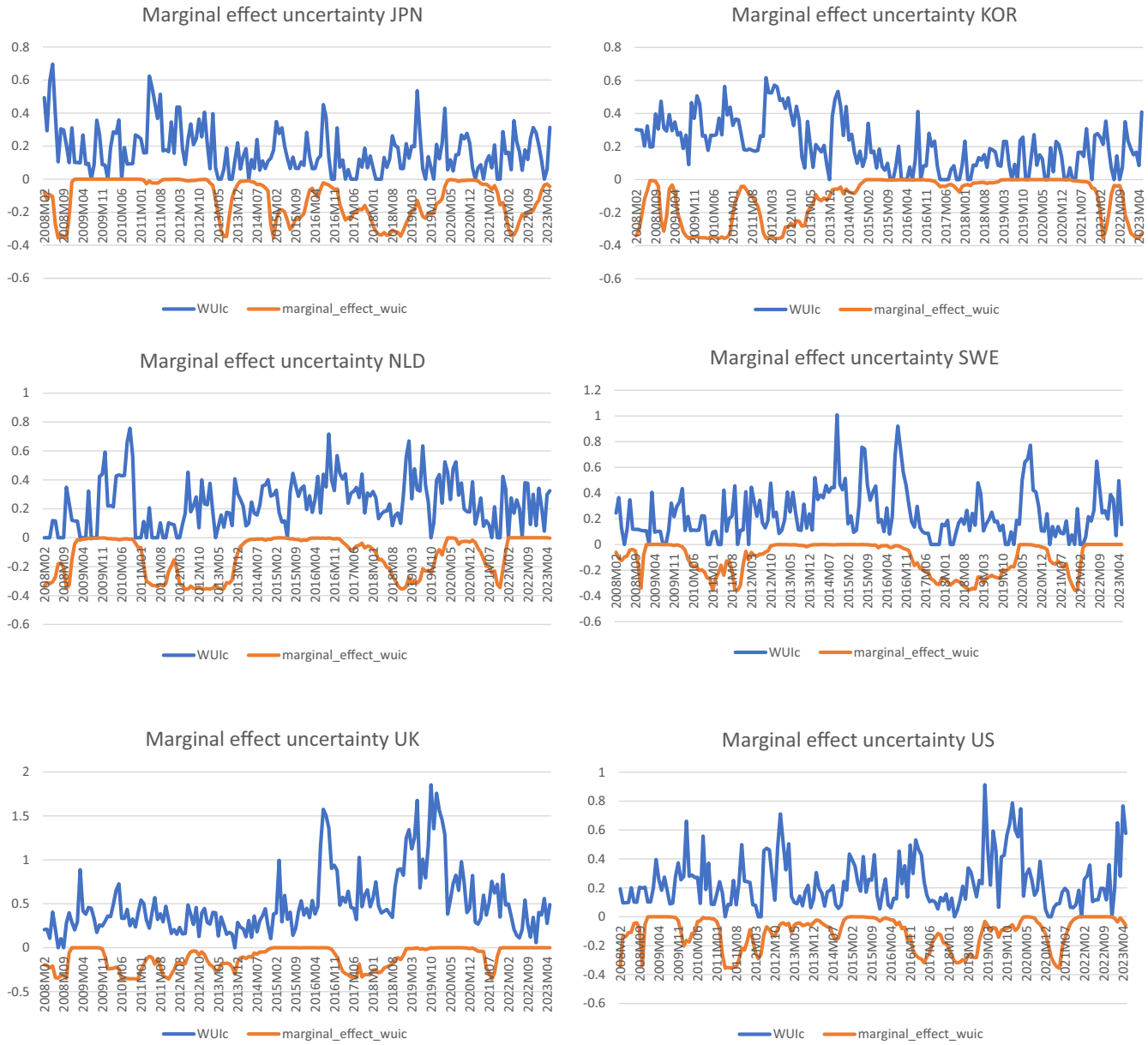


FIGURE 2 | (Continued)

This research reveals two distinct mechanisms through which uncertainty affects inflation, enhancing our understanding of current economic dynamics. On the demand side, high uncertainty often leads to lower economic output, which is typically associated with lower inflation. On the supply side, firms face price stickiness and consequently set prices higher than they would in a more stable environment to account for potential risks and fluctuations. However, there is one notable exception: a significant decline in the frequency of accurate regime classification of high-inflation episodes across all time horizons. This outcome is not surprising, given that the restricted sample period does not include the inflationary period of 2022–2023.

4.3 | Robustness

One potential limitation of the baseline model presented in Table 1 is that the results may be influenced by the inflationary period that began during the COVID-19 pandemic in early 2020. To address this matter, we have re-estimated our panel binary fixed-effects specification utilizing data up until December 2019. The results are presented in Table A2. We find that the results generally remain consistent over the restricted sample period.

To further enhance the credibility of the exclusion restriction underlying our instrumental variable (IV) strategy, we extend the baseline specification by incorporating a set of additional global controls intended to account for plausible direct transmission channels. Specifically, we include: (i) global commodity price indices; (ii) indicators of global financial conditions, such as US financial conditions indices; and (iii) a proxy for the global policy stance, exemplified by the US shadow policy rate. Conditioning on these variables reduces the risk that WUSI captures global cost-push disturbances or periods of international financial tightening that may exert a direct influence on domestic inflation, thereby reinforcing the validity of the identification

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 2 | Binary country-level IV model of high inflation (Forecast horizon $h = 12$).

Control variables	AUS	AUT	BEL	CAN	CHE	CZE	DEU	DNK	ESP	EST
Coef $(\widehat{UI}_t)$	1.106	−6.911***	−0.703	−3.735**	1.554***	3.261***	−2.720***	−1.167**	−1.688	−1.197***
Coef (π_t^e)	1.768***	1.956***	2.897***	7.317***	3.439***	4.445***	4.226***	2.502***	1.582***	0.874***
R^2	0.438	0.579	0.597	0.726	0.527	0.735	0.693	0.611	0.573	0.607
Threshold quartile (*Q3*)	3.09%	2.78%	3.12%	2.44%	0.83%	3.31%	2.06%	2.54%	2.95%	4.66%
Correct regime classification	69% 95%	68% 95%	67% 97%	83% 98%	56% 97%	80% 97%	80% 96%	74% 96%	68% 99%	71% 99%
Control variables	**FIN**	**FRA**	**GRC**	**HUN**	**IRL**	**ITA**	**JPN**	**KOR**	**LTU**	**LVA**
Coef $(\widehat{UI}_t)$	−1.863***	−2.682	−2.340***	−0.630	−4.158***	−2.597**	−5.811***	−1.795*	−2.331**	−2.742***
Coef (π_t^e)	1.928***	4.110***	0.880***	1.471***	1.208***	2.767***	4.256***	1.632***	2.249***	2.276***
R^2	0.603	0.641	0.477	0.616	0.504	0.746	0.776	0.463	0.767	0.786
Threshold quartile (*Q3*)	3.01%	2.06%	2.98%	5.27%	2.09%	2.67%	1.1%	3.49%	4.42%	4.12%
Correct regime classification	75% 96%	73% 96%	52% 94%	71% 95%	50% 95%	86% 97%	81% 98%	73% 92%	80% 98%	88% 98%
Control variables	**NLD**	**NOR**	**NZ**	**POL**	**PRT**	**SVK**	**SVN**	**SWE**	**UK**	**US**
Coef $(\widehat{UI}_t)$	1.995*	−1.257***	−0.542	0.604	−1.399**	−2.371***	−1.569***	−0.647	−2.673***	−4.512**
Coef (π_t^e)	3.384***	2.034***	1.346***	2.580***	3.921***	1.701***	0.956***	3.317***	1.305**	4.421***
R^2	0.613	0.412	0.573	0.683	0.805	0.673	0.445	0.674	0.542	0.773
Threshold quartile (*Q3*)	2.63%	3.29%	2.59%	4.17%	2.66%	3.70%	2.31%	2.26%	3%	2.91%
Correct regime classification	70% 92%	53% 97%	73% 96%	79% 95%	90% 98%	74% 97%	43% 98%	78% 98%	66% 98%	83% 98%

Note: This table shows probit IV time series results for each country separately; $\widehat{UI}_t$ is the country-level measure of uncertainty index instrumented by the World Uncertainty Spillover Index of the G7 economies plus China, π_t^e indicates the country-level 1-year ahead inflation expectations; The coefficient estimates of intercept are not listed; (***), (**) and (*) indicate 1%, 5% and 10% significance levels, respectively, based on robust Huber/White standard errors; *Threshold quartile* (*Q3*) is the third quartile cut-off value to define the binary high versus low inflation variable; *Correct regime classification* are the frequencies of correct in-sample fit of high inflation episodes (left figure) versus low inflation (right figure) with success cut-off being set to 50%; Estimation period is 2008 m^2–2023 m^5. We experimented with different forecast horizons ($h = 1, \ldots, 12$) and settled on a forecast horizon of $h = 12$, at which we obtained the best in-sample fit.

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 3 | Panel fixed-effects IV model of inflation (decomposition analysis).

Forecast horizon	Control variables	Demand-driven inflation		Supply-driven inflation	
		Coef β	Heterogeneity	Coef β	Heterogeneity
$h = 1$	$\widehat{UI_{i,t}}$	0.047	7.001	0.218	4.285
	$\pi^e_{i,t}$	0.596***	(5.7e−12)	0.748***	(1.2e−06)
	rea_t	−0.001		0.0006	
	$GSCPI_t$	0.273***		0.244***	
$h = 4$	$\widehat{UI_{i,t}}$	−0.669**	3.020	−0.074	2.641
	$\pi^e_{i,t}$	0.313**	(3.3e−04)	0.447***	(0.001)
	rea_t	−0.002**		0.0004	
	$GSCPI_t$	0.597***		0.575***	
$h = 8$	$\widehat{UI_{i,t}}$	−0.886**	6.377	1.825***	6.616
	$\pi^e_{i,t}$	0.311***	(1.4e−10)	0.280**	(5.1e−11)
	rea_t	−0.001		0.000	
	$GSCPI_t$	0.775***		0.998***	
$h = 12$	$\widehat{UI_{i,t}}$	−2.756***	3.834	4.311***	5.551
	$\pi^e_{i,t}$	−0.121	(1.1e−05)	−0.140	(6.3e−09)
	rea_t	−0.001		0.0006	
	$GSCPI_t$	0.611***		0.551***	

Note: This table shows panel fixed-effects IV regression results; $\widehat{UI_{i,t}}$ is the country-level measure of uncertainty index instrumented by the World Uncertainty Spillover Index ($WUSI_{i,t}$) of the G7 economies plus China, $\pi^e_{i,t}$ indicates the country-level 1-year ahead inflation expectations, rea_t indicates a global measure of real economic activity and $GSCPI_t$ is a global supply chain pressure index; The coefficient estimates of intercept are not listed; (***), (**) and (*) indicate 1%, 5% and 10% significance levels, respectively, based on robust HAC standard errors; *Heterogeneity* test for unobserved heterogeneity across countries using a likelihood ratio statistic and a χ^2 distribution (p-values below brackets); Quarterly fixed effects model estimated over 2008Q1–2023Q2 for 14 countries: Australia, Austria, Canada, the Czech Republic, Germany, France, Ireland, Italy, Japan, Korea, the Netherlands, Sweden, the United Kingdom, and the United States.

strategy. The results, presented in Table A3 for the decomposition analysis, confirm that the IV estimates remain qualitatively and quantitatively stable after the inclusion of these additional controls. This robustness supports the interpretation that WUSI captures exogenous variation in uncertainty spillovers rather than serving as a proxy for direct global price-level shocks.

We have also included fiscal variables in our models.[8] Barro and Bianchi (2024) find that (i) inflation from 2020 to 2022 responded strongly to government spending, and (ii) this response is consistent with the Fiscal Theory of the Price Level. Fiscal variables are typically characterized by lower-frequency data (e.g., quarterly data), which makes them less suitable for the current paper. Nevertheless, we employed a simple interpolation method to convert the quarterly US government expenditure series to monthly frequencies. The results for the US are presented in Table A4. Our analysis shows that including government expenditures in the US binary choice model does not significantly alter the results.

Overall, the primary outcomes persist across the entire sample period, suggesting that they are not solely a product of the global disinflationary environment that prevailed before the pandemic.

5 | Concluding Remarks and Future Research

The recent rapid surge in global inflation rates has become a major focus for policymakers, economists, and the public. However, they must carefully analyse the prevailing conditions to understand how these factors interact and influence inflation in specific economic contexts.

Although periods of high uncertainty are generally associated with lower inflation, an important result of our paper is the existence of two distinct channels through which uncertainty influences inflation: the demand channel and the supply channel. We find that uncertainty generally exerts a negative effect on demand-driven inflation, meaning that higher uncertainty tends to lower inflation by reducing demand. Conversely, uncertainty has a positive effect on supply-driven inflation, as supply chain disruptions or price-setting behaviours can lead to upward pressure on prices.

These findings have significant implications for future economic policy. They highlight the critical need for policymakers to incorporate uncertainty into their decision-making processes. Doing so would provide policymakers with a powerful tool to anticipate and mitigate the impact of economic shocks. Additionally, uncertainty is multi-dimensional, encompassing various types of disruptions and economic conditions. Understanding these dimensions enables more nuanced and effective monetary policy responses to inflationary pressures. For instance, aggressive interest rate adjustments may not be necessary when uncertainty is high, even if inflation expectations are elevated, as maintaining a stable inflationary environment is essential for economic stability.

Future research could build upon this analysis by employing binary dynamic panel regression models. Such models can capture the path dependence that arises from factors like adjustment costs to new technologies, technological constraints and habit formation. This approach aligns with the work of Arellano and Carrasco (2003). Additionally, future studies could benefit from a more comprehensive exploration of how decomposing inflation into demand and supply components may be linked to the heterogeneity observed among different countries.

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Acknowledgements

Part of this paper was written during Kouretas' research visits at Stetson University, International Monetary Fund, Michigan State University, Drexel University, Frank J. Petrilli Center for Research in International Finance at Fordham University as well as at the University of Chicago at Illinois. Kouretas acknowledges the hospitality of Stetson University, International Monetary Fund, Michigan State University, Drexel University, Fordham University and the University of Chicago at Illinois. Aslanidis acknowledges financial support by the Spanish Government, Ministry of Science and Innovation under the Project reference PID2022-137382NB-I00. Kouretas also acknowledges generous financial support by Stetson University under Deans' research grant, by the Research Centre of Athens University of Economics and Business under Research grants 11309201 and 11372101, by IPAG Business School Senior Research Affiliate research grant and by the Research Centre of the University of Crete under Research grant 2987. An earlier version of the paper was presented at 2024 NBER-NSF Time-Series Conference, 20–21 September 2024, University of Pennsylvania, Philadelphia and the 28th International Conference on Macroeconomic Analysis and international Finance, Department of Economics, University of Crete, Rethymno, Greece, 30 May–1 June 2024, Department of Economics, University of Crete, Rethymno, Greece and thanks are due to conference participants for many helpful comments and discussions. The paper has also benefited from insightful comments and suggestions by seminar participants at the Athens University of Economics and Business, IPAG Business School, Michigan State University, Stetson University, University of Michigan and University of Southern Florida. We are grateful to Richard Baillie, George Constantinides, Sris Chatterjee, Frank Diebold, Dennis Dreusch, John Duca, Davide Furceri, Iftekhar Hasan, Gunnar Niemann, Francisco Nadal de Simone, Steve Ongena, Chris Pantzalis, Paul McNeilis, George Tavlas, George Tsetsekos and Tianxia Yang for stimulating discussions on earlier drafts of the paper. We also thank Melih Firat for providing the data for the two series, demand component and supply component. Finally, we thank two anonymous referees for numerous valuable comments which improved the paper substantially. The usual caveat applies. The publication of this article in OA mode was financially supported by HEAL-Link.

Funding

The authors have nothing to report.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Endnotes

[1] See Easaw and Golinelli (2022) for a recent contribution on the role of inflation expectations, among others.

[2] The countries included in the analysis are Australia (AUS), Austria (AUT), Belgium (BEL), Canada (CAN), Switzerland (CHE), the Czech Republic (CZE), Germany (DEU), Denmark (DNK), Spain (ESP), Estonia (EST), Finland (FIN), France (FRA), Greece (GRC), Hungary (HUN), Ireland (IRL), Italy (ITA), Japan (JPN), Korea (KOR), Lithuania (LTU), Latvia (LVA), the Netherlands (NLD), Norway (NOR), New Zealand (NZL), Poland (POL), Portugal (PRT), Slovakia (SVK), Slovenia (SVN), Sweden (SWE), the United Kingdom (UK), and the United States (US). Due to more limited data availability for the uncertainty measure and the demand- and supply-driven components of inflation, the panel model estimations are conducted on a reduced subset of countries.

[3] As a robustness check, we consider alternative definitions (e.g., a 3% inflation cutoff), but the results remain qualitatively similar.

[4] Note that monthly data on uncertainty are available for 19 out of 30 countries in our sample. For those countries where the monthly-country-level data are not available, we use the global uncertainty index (WUI).

[5] For the estimation of binary response models with instrumental variables, Wooldridge (2002, 621-623) argues that while the first-stage models used to generate the fitted probabilities might not be perfectly specified, the overall approach can still produce consistent estimates in the second stage. This robustness comes from the fact that the fitted probabilities capture some of the relevant variation in the endogenous variable, even if the functional form is not exactly correct.

[6] Data limitations for the uncertainty indicator and the demand- and supply-driven inflation components restrict the panel estimations to a smaller set of countries.

[7] In this exercise, we use the full sample of 30 countries.

[8] We thank an anonymous referee for the suggestion.

References

Ahir, H., N. Bloom, and D. Furceri. 2022. The World Uncertainty Index, NBER Working Paper 29763.

Arellano, M., and R. Carrasco. 2003. "Binary Choice Panel Data Models With Predetermined Variables." *Journal of Econometrics* 115: 123–157.

Ball, L., and R. Moffitt. 2021. Productivity Growth and the Phillips Curve. NBER Working Paper 8421.

Banerjee, A., G. S. Hall, G. P. Kouretas, and G. S. Tavlas. 2023. "Advances in Forecasting: An Introduction in Light of the Debate on Inflation Forecasting." *Journal of Forecasting* 42: 455–463.

Barro, R. J., and F. Bianchi. 2024. Fiscal Influences on Inflation in OECD Countries, 2020–2022, NBER Working Paper 31838.

Basu, S., and B. Bundick. 2017. "Uncertainty Shocks in a Model of Effective Demand." *American Economic Review* 85: 937–958.

Beckmann, J., and R. Czudaj. 2026. "Uncertainty Shocks and Inflation: The Role of Credibility and Expectation Anchoring." *Journal of International Money and Finance* 160: 103472.

Benigno, P., and G. B. Eggertsson. 2024. "The Slanted-L Phillips Curve." *American Economic Review* 114: 84–89.

Bettarelli, L., D. Furceri, P. Pizzuto, and N. Shakoor. 2024. "Uncertainty and Innovation in Renewable Energy." *Journal of International Money and Finance* 149: 103202.

Bianchi, F., H. Kung, and M. Tirskikh. 2023. "The Origins and Effects of Macroeconomic Uncertainty." *Quantitative Economics* 14: 855–896.

Bloom, N. 2009. "The Impact of Uncertainty Shocks." *Econometrica* 77: 623–685.

Born, B., and J. Pfeifer. 2021. "Uncertainty-Driven Business Cycles: Assessing the Markup Channel." *Quantitative Economics* 12: 587–623.

Caldara, D., S. Conlisk, M. Iacoviello, and M. Penn. 2026. "Do Geopolitical Risks Raise or Lower Inflation." *Journal of International Economics* 159: 104188.

Castelnuovo, E. 2023. "Uncertainty Before and During COVID-19: A Survey." *Journal of Economic Surveys* 37: 821–864.

Chatterjee, P. 2024. "Uncertainty Shocks, Financial Frictions, and Business Cycle Asymmetries Across Countries." *European Economic Review* 162: 104646.

Chauvet, M., and S. Potter. 2005. "Forecasting Recession Using the Yield Curve." *Journal of Forecasting* 24: 77–103.

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

De Santis, R. A., and W. Van der Veken. 2021. Business Cycle Fluctuations: Financial Shocks Versus Uncertainty Shocks. European Central Bank, Mimeo.

Easaw, J., and R. Golinelli. 2022. "Professionals Inflation Forecasts: The Two Dimensions of Forecaster Inattentiveness." *Oxford Economic Papers* 74: 701–720.

Estrella, A., and G. A. Hardouvelis. 1991. "The Term Structure as a Predictor of Real Economic Activity." *Journal of Finance* 46: 555–576.

Fernández-Villaverde, J., P. Guerrón-Quintana, K. Kuester, and J. Rubio-Ramírez. 2015. "Fiscal Volatility Shocks and Economic Activity." *American Economic Review* 105: 3352–3384.

Firat, M., and O. Hao. 2024. Demand vs. Supply Decomposition of Inflation: Cross-Country Evidence With Applications, International Monetary Fund Working Paper 23/205.

Furceri, D., G. Karras, and K. Yarveisi. 2024. "The Effects of Uncertainty on the Current Account." Mimeo.

Grundler, D. 2023. "The Uncertainty Channel of Euro Area Monetary Transmission." SSRN file:///C:/Users/user/Downloads/ssrn-4378196.pdf.

Haque, Q., and L. M. Magnusson. 2021. "Uncertainty Shocks and Inflation Dynamics in the US." *Economics Letters* 202: 109825.

Harding, M., J. Lindé, and M. Trabandt. 2023. "Understanding Post-COVID Inflation Dynamics." *Journal of Monetary Economics* 140: S101–S118.

Kilian, L. 2009. "Not All Oil Price Shocks Are Alike: Disentangling Demand and Supply Shocks in the Crude Oil Market." *American Economic Review* 99: 1053–1069.

Kilian, L. 2019. "Measuring Global Economic Activity: Do Recent Critiques Hold up to Scrutiny?" *Economics Letters* 178: 106–110.

Koch, C., and D. Noureldin. 2023. "How We Missed the Inflation Surge: An Anatomy of Post-2020 Inflation Forecast Errors." IMF Working Paper, WP/23/102.

Leduc, S., and Z. Liu. 2016. "Uncertainty Shocks Are Aggregate Demand Shocks." *Journal of Monetary Economics* 82: 20–35.

Reis, R. 2022. "The Burst of High Inflation in 2021–22: How and Why Did We Get Here?" BIS Working Papers No 1060.

Schmitt-Grohé, S., and M. Uribe. 2022. "What Do Long Data Tell Us about the Inflation Hike Post COVID-19 Pandemic?" NBER Working Paper 30357.

Shapiro, A. H. 2024. "Decomposing Supply and Demand Driven Inflation." *Journal of Money, Credit and Banking* 58: 365–388.

Wooldridge, J. M. 2002. *The Econometrics Analysis of Cross Section and Panel Data*. Th MIT Press.

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Appendix A

TABLE A1 | Data description.

Data	Data frequency	Data source
Consumer price index (CPI) per country	Monthly	OECD
Demand- and supply-driven inflation components (personal consumption expenditure: price and quantity series on over expenditure items) per country	Quarterly	Firat and Hao (2024). Retrieved from Haver Analytics and Eurostat.
World Uncertainty Index (WUI) per country	Monthly	Ahir et al. (2022)
1-year ahead inflation expectations per country	Monthly	Consensus Forecasts
Global economic activity index Kilian	Monthly	Federal Reserve Bank of St. Louishttps://fred.stlouisfed.org/
Global supply chain pressure index	Monthly	Federal Reserve Bank of New Yorkhttps://www.newyorkfed.org/
Global price index of all commodities	Monthly	Federal Reserve Bank of St. Louishttps://fred.stlouisfed.org/
United States shadow fed funds rate	Monthly	Jing Cynthia Wu
Chicago Fed national financial conditions index	Weekly	Federal Reserve Bank of St. Louishttps://fred.stlouisfed.org/
Countries in the sample		Australia (AUS), Austria (AUT), Belgium (BEL), Canada (CAN), Switzerland (CHE), Czech Republic (CZE), Germany (DEU), Denmark (DNK), Spain (ESP), Estonia (EST), Finland (FIN), France (FRA), Greece (GRC), Hungary (HUN), Ireland (IRL), Italy (ITA), Japan (JPN), Korea (KOR), Lithuania (LTU), Latvia (LVA), Netherlands (NLD), Norway (NOR), NZ (New Zealand), Poland (POL), Portugal (PRT), Slovakia (SVK), Slovenia (SVN), Sweden (SWE), the UK (UK), and the USA (US).

TABLE A2 | Binary panel fixed-effects IV model of high inflation (excluding post-COVID-19 period after January 2020).

				Correct regime classification	
Forecast horizon	**Control variables**	***Coef β***	***Heterogeneity***	***High inflation***	***Low inflation***
$h = 1$	$\widehat{UI}_{i,t}$ $\pi^e_{i,t}$ rea_t $GSCPI_t$	−3.157*** 2.025*** 0.005*** 0.508***	7.709 (4e−020)	56%	98%
$h = 3$	$\widehat{UI}_{i,t}$ $\pi^e_{i,t}$ rea_t $GSCPI_t$	−2.828*** 1.495*** 0.005*** 0.573***	10.31 (9e−029)	48%	98%
$h = 6$	$\widehat{UI}_{i,t}$ $\pi^e_{i,t}$ rea_t $GSCPI_t$	−3.718*** 0.793*** 0.002*** 0.779***	6.733 (7e−017)	22%	97%
$h = 9$	$\widehat{UI}_{i,t}$ $\pi^e_{i,t}$ rea_t $GSCPI_t$	−4.206*** 0.295*** 0.002*** 0.866***	3.209 (5e−06)	4%	98%
$h = 12$	$\widehat{UI}_{i,t}$ $\pi^e_{i,t}$ rea_t $GSCPI_t$	−3.581*** 0.005 0.004*** 0.651***	2.199 (0.003)	0%	99%

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE A3 | Panel FE- IV decomposition of inflation with global controls.

		Demand-driven inflation		Supply-driven inflation	
Forecast horizon	**Control variables**	**Coef β**	**Heterogeneity**	**Coef β**	**Heterogeneity**
$h = 1$	$\widehat{UI_{i,t}}$	0.357	5.922	0.238	4.117
	$\pi^{e}_{i,t}$	0.578***	(7.4e−10)	0.771***	(2.5e−06)
	rea_t	−0.0002		0.0004	
	$GSCPI_t$	0.201***		0.218***	
	$Comm_t$	0.013		0.018*	
	SIR_t	0.052*		−0.008	
	$NFCI_t$	−0.277**		−0.009	
$h = 4$	$\widehat{UI_{i,t}}$	−0.262**	4.156	0.237	3.798
	$\pi^{e}_{i,t}$	0.146	(2.3e−06)	0.270*	(1.1e−05)
	rea_t	−0.003		0.0001	
	$GSCPI_t$	0.690***		0.657***	
	$Comm_t$	0.028***		0.026***	
	SIR_t	−0.144***		−0.124***	
	$NFCI_t$	0.015		0.008	
$h = 8$	$\widehat{UI_{i,t}}$	0.577	7.069	1.509**	5.885
	$\pi^{e}_{i,t}$	0.316***	(6.6e−12)	0.243**	(1.2e−09)
	rea_t	−0.001		−0.0007	
	$GSCPI_t$	0.802***		0.973***	
	$Comm_t$	−0.008		0.005	
	SIR_t	−0.073**		−0.045	
	$NFCI_t$	0.100**		−0.210***	
$h = 12$	$\widehat{UI_{i,t}}$	−1.672***	4.688	2.796***	5.751
	$\pi^{e}_{i,t}$	0.264***	(3.2e−07)	0.256**	(2.6e−09)
	rea_t	0.001		0.001	
	$GSCPI_t$	0.506**		0.329*	
	$Comm_t$	−0.080*		−0.057*	
	SIR_t	0.224***		−0.341***	
	$NFCI_t$	−0.269***		−0.146***	

Note: This table shows panel fixed-effects IV regression results; $\widehat{UI_{i,t}}$ is the country-level measure of uncertainty index instrumented by the World Uncertainty Spillover Index ($WUSI_{i,t}$) of the G7 economies plus China, $\pi^{e}_{i,t}$ indicates the country-level 1-year ahead inflation expectations, rea_t indicates a global measure of real economic activity, $GSCPI_t$ is a global supply chain pressure index, $Comm_t$ is a global price index of all commodities, SIR_t is the United States shadow fed funds rate (Cynthia Wu), and $NFCI_t$ is the Chicago Fed national financial conditions index; The coefficient estimates of intercept are not listed; (***), (**) and (*) indicate 1%, 5% and 10% significance levels, respectively, based on robust HAC standard errors; *Heterogeneity* test for unobserved heterogeneity across countries using a likelihood ratio statistic and a χ^2 distribution (p-values below brackets); Quarterly fixed effects model estimated over 2008Q1–2023Q2 for 14 countries: Australia, Austria, Canada, the Czech Republic, Germany, France, Ireland, Italy, Japan, Korea, the Netherlands, Sweden, the United Kingdom, and the United States.

TABLE A4 | Binary US model of high inflation (Forecast horizon $h = 12$).

	US
Coef (UI_t)	−5.180**
Coef $\left(\pi^{e}_{t}\right)$	4.770***
Coef $\left(rea_t\right)$	0.016***
Coef $\left(GSCPI_t\right)$	0.639*
Coef $\left(fiscal_t\right)$	0.142***
R^2	0.815
Threshold quartile (*Q3*)	2.91%
Correct regimeclassification	85% 98%

10991158, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/ijfe.70215 by Spanish Cochrane National Provision (Ministerio de Sanidad), Wiley Online Library on [05/11/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License