GENEVA GRADUATE INSTITUTE

INSTITUT DE HAUTES ÉTUDES INTERNATIONALES ET DU DÉVELOPPEMENT

GRADUATE INSTITUTE OF INTERNATIONAL AND DEVELOPMENT STUDIES

Graduate Institute of International and Development Studies

International Economics Department

Working Paper Series

Working Paper No. HEIDWP14-2025

The Double-Digit Trigger: Estimating Inflation Attention Thresholds in Ukraine Using Parliamentary Speeches

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Abstract

This paper estimates Ukraine's inflation attention threshold using a text-based proxy derived from the relative frequency of the word "inflation" in parliamentary speeches. During a relatively stable macroeconomic period between 2017 and 2022, the estimated threshold is approximately 9-10%. This finding aligns with results obtained using Google Trends data, where attention increased just prior to inflation reaching double-digit levels. Crucially, the parliamentary proxy also facilitates estimation for another stable period preceding the global financial crisis (2002-2007). The remarkably similar threshold estimates across both stable periods suggest that attention dynamics in Ukraine exhibit structural consistency under non-crisis conditions. These findings underscore the value of parliamentary speech analysis as a robust tool for tracking inflation salience in contexts with limited data availability.

Keywords: inflation, attention, parliamentary speeches, threshold regression, monetary policy

JEL: C82, D83, E31, E52, E71

Acknowledgements: The author extends gratitude to Oleksandr Talavera for valuable comments and suggestions. This research was conducted under the coaching program of the Bilateral Assistance and Capacity Building for Central Banks (BCC), financed by SECO, and the Graduate Institute in Geneva. The views expressed in this paper are solely those of the author(s) and do not necessarily reflect those of the National Bank of Ukraine.

1. Introduction

Inflation is undoubtedly one of the most important macroeconomic indicators, directly shaping investment, savings, and therefore economic decisions. Today, information spreads so quickly that knowing the current inflation rate seems almost costless, yet the daily flood of news forces people to ration attention, letting the most urgent story crowd out the rest (Djerf-Pierre, 2012). Even a key indicator like inflation can stay in the background until its movements begin to affect decisions more than other headlines. Rational-inattention and sticky-information theories formalize this behavior, showing that people update expectations only when the benefit outweighs the required mental effort (Mankiw & Reis, 2002; Sims, 2003). Limited attention can help a central bank when shocks are small, but once prices claim the spotlight, expectations shift faster, persistence rises, and stabilization becomes costlier (Pfäuti, 2024). Policymakers' attention may be even more influential because parliamentary debate guides fiscal choices and signals support for monetary policy. This paper, therefore, addresses the following question: at what inflation levels do parliamentarians in Ukraine begin to pay more attention to price developments, and do these thresholds differ from those observed among households?

A growing body of work in behavioral macroeconomics demonstrates that attention to inflation varies with the economic environment. Sticky information models posit that individuals update their expectations intermittently, particularly when acquiring new data is costly (Mankiw & Reis, 2002). Rational inattention theory further elaborates that, during periods of low and predictable price growth, the benefit of monitoring inflation is minimal relative to the required effort (Sims, 2003). Field evidence corroborates that consumers frequently overlook minor price changes during stable inflation episodes (Cavallo et al., 2017), while laboratory studies indicate clear "switch-on" points once inflation surpasses a salient level (Maćkowiak et al., 2023). Analyses of Google Trends data extend this understanding, revealing that most countries exhibit distinct attention thresholds. However, both the breakpoint and the subsequent pattern of attention differ across nations, seemingly reflecting each country's inflation history and media context (Korenok et al., 2023; Buelens, 2024). These studies, nevertheless, rely exclusively on public search data, thus leaving unexamined how policymakers themselves monitor and respond to rising prices.

This paper contributes to the literature on inflation attention by developing an institutional proxy for policymakers' attention, specifically by quantifying the monthly share of parliamentary speeches that mention "inflation." Text-based methods have already proven effective in tracing issue salience in parliamentary oversight and central bank deliberations (Sanders et al., 2017; Hansen et al., 2018; Fraccaroli et al., 2020). Applying threshold regression to this series and comparing the resulting breakpoints with the public attention threshold estimated from Google Trends data (Homeniuk, forthcoming) reveals how legislators adjust their focus as prices rise, and

whether their reaction points diverge from those of households. Importantly, household internet access in Ukraine remained too low in earlier years to support a reliable Google Trends analysis; thus, the parliamentary proxy offers a consistent, long-run measure of attention from 2002 onward.

In terms of inflation attention, Ukraine presents a unique case study. Price growth has been highly volatile due to repeated external shocks, and various developments, such as political reforms and the full-scale war, compete for public attention. Since adopting an inflation-targeting framework in 2015, the National Bank of Ukraine has relied on well-anchored expectations; consequently, shifts in public and parliamentary focus on prices are particularly important for policy transmission. The renewed surge in inflation during 2024–2025, when headline CPI climbed back toward double-digit territory, underscores the importance of pinpointing the inflation level that re-engages attention on price dynamics. Conventional search-based proxies are less reliable in contexts of uneven internet penetration; therefore, this study utilizes parliamentary transcripts, which offer a continuous record of legislative discourse on the topic. This approach to tracing attention provides a practical benchmark for assessing when inflation begins to shape policy debate.

Utilizing ParlaMint speech transcripts spanning May 2002 to November 2023 and monthly inflation data for Ukraine, this study constructs a parliamentary attention index. This index quantifies the monthly proportion of speeches in which deputies mention “inflation.” Threshold regression is then applied to this series, initially focusing on two stable sub-periods (May 2002 to September 2007 and January 2017 to January 2022), and subsequently within rolling windows that progressively incorporate crisis years. Moving-average versions of the index are employed for robustness checks, while a previously estimated Google Trends series for 2017–2022 enables a direct comparison with public attention dynamics.

The findings indicate that, in relatively stable environments, parliamentary attention increases as inflation approaches double-digit levels, subsequently plateauing, which produces a characteristic “spike-and-plateau” pattern. Across all baseline and robustness specifications, the estimated threshold consistently falls between 8.8 and 9.8 percent, a range closely aligning with the public breakpoints obtained from Google Trends searches. Beyond the main breakpoint, an additional peak in parliamentary mentions is also observed at very low inflation rates, specifically around 2 to 3 percent, a characteristic absent from the Google Trends series. This pattern likely reflects either caution about deflation risks or an effort to highlight favorable price stability. Rolling-window analyses indicate that the estimated threshold drifts upward toward the mid-teens or higher when periods of significant disruption, such as the global financial crisis, the 2014–2016 period of russian aggression and currency turmoil, or the 2022 full-scale invasion, are included in the sample. This consistently confirms that significant competing crises effectively

crowd out inflation from the policy agenda, implying that a considerably higher inflation rate is required to capture parliamentary attention during such periods of heightened instability. Smoothing the attention series enhances statistical significance while preserving the qualitative patterns observed. This finding underscores a narrow window during which monetary authorities can effectively intervene before heightened attention amplifies inflation persistence.

The second contribution of this paper to the literature is demonstrating that a country's inflation attention threshold may not be fixed. Most existing studies typically report a single breakpoint per country, assuming its stability over a fixed time sample (Korenok et al., 2023; Buelens, 2024). Testing this assumption is challenging in advanced economies, such as the United States, where inflation remained relatively stable from the mid-1990s until the COVID-19 surge.

However, emerging economies that experience repeated price shocks offer a clearer opportunity to examine the stability of these thresholds. Ukraine, for example, has faced sharp inflation spikes in 2008–2009, during 2014–2015 following russia's annexation of Crimea and aggression in the east, and again after February 2022. When these crisis years are included in the sample, the threshold estimated from parliamentary speeches becomes highly unstable and tends to jump significantly. Google Trends data reveal the same pattern (Homeniuk, forthcoming). This aligns with the "issue-attention" view, which posits that large shocks "crowd out" other topics from public debate (Djerf-Pierre, 2012; Park & Jennings, 2015).

Consequently, thresholds calculated with such crisis periods included in the sample are likely to be overstated and offer limited practical policy utility. Focusing instead on calm sub-samples yields a breakpoint that more accurately indicates when inflation re-enters the national agenda. This approach can help central banks better time their communications and policy interventions. This same split-sample methodology can be effectively applied in other emerging economies that frequently encounter episodes of conflict or significant macroeconomic turbulence.

The remainder of this paper is organized as follows. Section 2 reviews the literature on limited attention and inflation dynamics. Section 3 describes the empirical strategy, including the threshold regression methodology and data sources. Section 4 presents and discusses the results. Section 5 concludes the paper.

2. Inflation Attention Thresholds Literature Review

When inflation is low and predictable, individuals tend to pay minimal attention to it. Field experiments conducted in supermarkets demonstrate that consumers systematically misperceive prices even on store shelves during periods of modest aggregate price growth, suggesting that publicly available inflation data may not warrant their limited cognitive effort (Cavallo et al.,

2017). Rational-inattention theory formalizes this intuition, positing that because information processing is costly, individuals disregard small, transitory price movements until the expected benefit of attentiveness outweighs the associated cognitive cost (Sims, 2003). The "sticky-information" model extends this concept to macroeconomics, accounting for sluggish expectation adjustment during periods of stability (Mankiw & Reis, 2002). A recent synthesis of laboratory and survey evidence confirms that limited cognitive capacity precisely generates such state-dependent inattention (Maćkowiak et al., 2023; Bracha & Tang, 2025).

The post-COVID price surge presented a rare opportunity to observe the activation point of public attention. Search-engine data reveal a clear non-linear relationship: public interest remains subdued during initial low inflation rates, subsequently escalating significantly once inflation enters the 2–4 percent range, thereby confirming the existence of a discrete attention threshold across virtually all advanced economies examined (Korenok, Munro & Chen, 2023). However, even within the euro area, despite a common monetary policy, the precise trigger point varies considerably, highlighting the significant influence of national economic memory and media culture on shaping inflation salience (Buelens, 2024).

Furthermore, cross-regime estimates indicate that once this threshold is breached, price shocks exhibit greater persistence: inflation persistence increases and the Phillips curve steepens, leading to a substantial rise in the real cost of disinflation if policy responses are delayed (Pfäuti, 2024). A second observed regularity connects historical inflation experience with behavioral responses: countries with a prolonged history of higher inflation exhibit elevated attention thresholds, suggesting a gradual habituation to price variability (Korenok et al., 2023). Evidence from high-inflation and emerging markets supports this pattern. In Turkey or Brazil, for example, where average inflation has consistently ranged from high single digits to low double digits, public interest is only significantly triggered once inflation itself reaches that range. Consequently, Ukraine's average inflation of approximately 13 percent since 2007 suggests a comparatively high attention threshold, even prior to direct empirical examination of the data. However, no prior study has empirically established this threshold.

Complementary evidence from cognitive psychology indicates that round numbers carry disproportionate salience in the processing of economic information. Survey data reveal that consumers consistently round inflation expectations to the nearest five-percentage-point increment, indicating bounded precision and a reliance on salient numerical categories (Binder, 2015). Earlier psychophysical research demonstrates that individuals do not register price changes until inflation surpasses distinct perceptual thresholds, thereby contradicting the assumption of linear sensitivity to minor movements (Batchelor, 1986). Together, these findings collectively offer a micro-level rationale for the "double-digit trigger": when the leading digit

transitions from 9 to 1, inflation is mentally reclassified into a higher numerical category, eliciting an immediate surge in attention.

An additional line of research emphasizes that attention to inflation is not determined in isolation but rather competes for scarce cognitive resources and media "agenda space." According to Downs's issue-attention cycle, public concern typically rises sharply during an "alarmed discovery" phase triggered by salient events, peaks amid intensive media coverage, and subsequently declines as competing topics crowd it out (Downs, 1972; Park & Jennings, 2015). Empirical studies confirm that news coverage frequently operates as a zero-sum game: surges in attention to war, pandemics, or financial crises mechanically displace coverage of inflation and other economic indicators (Djerf-Pierre, 2012; Park, 2012). Consequently, during periods of major crisis, inflation must attain higher levels to penetrate this media barrier and capture public attention.

Another strand of literature investigates the inflation threshold at which economic growth is adversely affected. Meta-analyses typically identify this breakpoint at approximately 5 percent for advanced economies and 10–12 percent for developing economies, while the sole Ukrainian estimate indicates an adverse effect above 4.5 percent (Khan & Senhadji, 2001; Kremer et al., 2012; Mishchenko et al., 2018). Although primarily focused on output effects rather than attention dynamics, these findings underscore the policy imperative of identifying critical inflation levels pertinent to each country.

Most attention studies rely on Google Trends because it is frequent, publicly accessible, and cross-country comparable. However, this proxy's reliability diminishes when internet access is uneven or when war and other major shocks significantly influence online behavior, conditions that have long characterized Ukraine. While Twitter metrics can be useful in certain contexts, their local user penetration is insufficient for a comprehensive analysis in Ukraine. To circumvent these limitations, the present study constructs a novel institutional measure: the monthly proportion of Verkhovna Rada (Parliament of Ukraine) speeches containing the term "inflation." This series, commencing in 2002, is impervious to household connectivity issues and accurately reflects the salience of price developments for national decision-makers.

In summary, existing research indicates that inflation attention is state-dependent, with breakpoints that vary across countries, influenced by perceptual biases, media competition, and historical inflation experience. However, nearly all empirical studies to date predominantly rely on public search or news-based proxies, which may misrepresent true policymaker focus, particularly in contexts such as Ukraine's, where uneven internet access and pervasive crises can distort online behavior. To address this methodological gap, this paper constructs an institutional measure based on the proportion of Ukrainian parliamentary speeches mentioning "inflation,"

thereby enabling the estimation of legislators' attention thresholds and their comparison with public thresholds derived from Google Trends data.

3. Empirical Strategy

3.1. Methodology

To estimate the inflation-attention threshold (γ), defined as the Consumer Price Index (CPI) value at which the relationship between inflation and attention undergoes a structural change (including a potential discontinuity in the intercept and/or a change in the slope), this study applies a threshold generalized linear model[1]:

$$y_t = \alpha_1 + \alpha_2 I(x_t > \gamma) + \beta_1 x_t + \beta_2 (x_t - \gamma)_+ + e_t, \quad (1)$$

where:

- y_t is a measure of attention to inflation (Google Trends index, mentions in parliament) in Ukraine in period t;
- x_t is a measure of inflation (CPI) in Ukraine in period t;
- γ – threshold inflation level to be estimated;
- $I(x_t > \gamma)$ – indicator function equal to 1 if $x_t > \gamma$, 0 otherwise;
- $(x_t - \gamma)_+$ – equals to $x_t - \gamma$ if $x_t > \gamma$, 0 otherwise.

Thus, for inflation values up to the threshold, the equation is as follows:

$$y_t = \alpha_1 + \beta_1 x_t + e_t, \quad (2)$$

And for inflation values beyond the threshold level:

$$y_t = (\alpha_1 + \alpha_2) + \beta_1 x_t + \beta_2 (x_t - \gamma) + e_t. \quad (3)$$

That is, $(\alpha_1 + \alpha_2 - \beta_2\gamma)$ becomes the new intersection of the function, and $(\beta_1 + \beta_2)$ reflects the new coefficient of change in the level of attention for inflation values above the threshold.

To obtain p-values for the slope and intercept coefficients, asymptotic Wald tests are employed, as provided by Stata's *threshold* command. The p-value for the change-point (threshold) is subsequently calculated using a bootstrap-based supremum Wald test, as implemented in R's *chngpt* package.

[1] From the R package *chngpt* (Fong et al., 2017), documentation available at https://cran.r-project.org/web/packages/chngpt/chngpt.pdf

3.2. Data Description

As a novel measure of attention to inflation, this study utilized mentions of the term “inflation” within Ukrainian parliamentary discussions and speeches. Data concerning the corpora of parliamentary debates were obtained from the ParlaMint[2] project (Kuzman et al., 2024). Linguistically annotated multilingual comparable corpora in English were utilized to mitigate potential issues arising from mentions in different languages (Ukrainian and Russian). Data for Ukraine span from the parliamentary session of 14 May 2002 to 10 November 2023. The monthly total number of parliamentary speeches is presented in Figure A.1 of the Online Appendix.

To construct a proxy for parliamentary attention to inflation for each session[3], the percentage of speeches mentioning the term “inflation” at least once was calculated. To exclude brief interjections and other short exclamations, speeches shorter than 50 words were filtered out. The resulting monthly values of these speech frequencies, along with the corresponding monthly year-on-year Consumer Price Index (CPI), are presented in Figure 1.

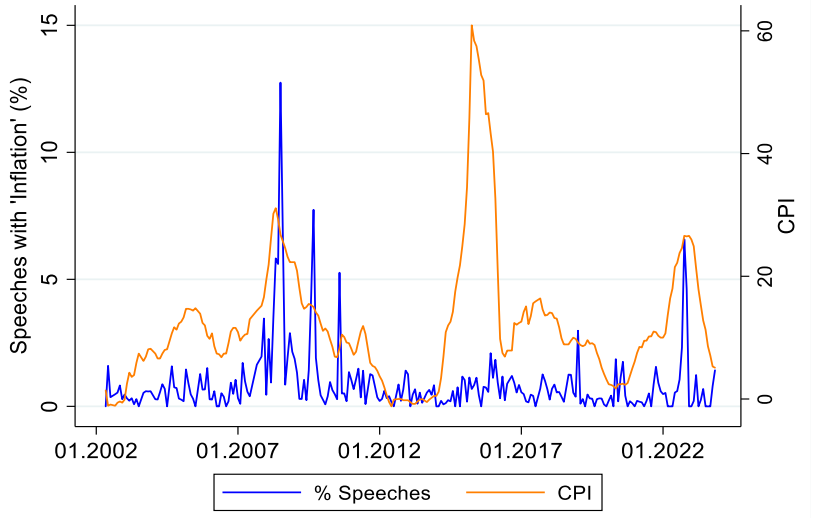

Figure 1. Monthly CPI and percent of speeches containing “inflation”

Notes: The lines illustrate the monthly Consumer Price Index (right axis) and the proportion of Ukrainian parliamentary speeches mentioning "inflation" (left axis). Attention exhibits notable spikes during 2008–2009, remains subdued in 2014–2016 despite elevated CPI levels, and shows a brief increase following the 2022 invasion. Given these heterogeneous responses, the subsequent threshold analysis primarily focuses on the more stable periods of 2002–2007 and 2017–2022.

[2] https://www.clarin.eu/parlamint#parlamint-corpora, accessed 10.06.2025

[3] On certain days, sessions may comprise two parts – a morning and an evening sitting. Several months – most frequently August (a full list is provided in the Online Appendix) – contain no plenary sessions due to parliamentary recess. These months are consequently excluded from the analysis.

The plot reveals notably distinct patterns of parliamentary attention across the three major shock periods. During the global financial crisis of 2008–2009, an episode primarily framed as an economic shock, the proportion of speeches mentioning inflation exceeded 12 percent in several months. In contrast, during 2014–2016, when parliamentary debates primarily centered on russia's aggression and national security issues, inflation was even higher yet garnered almost no parliamentary attention, evidently crowded out by more pressing national concerns. The full-scale invasion that began in 2022 elicited an intermediate response: references to inflation eventually increased, but only after several months of subdued discussion, underscoring how the nature of a crisis fundamentally shapes both the timing and intensity of attention. Given the sharp divergence of these crisis-specific dynamics from behavior observed in calm periods, the threshold analysis therefore excludes the three shock windows and focuses on two stable sub-samples: May 2002 to September 2007 and January 2017 to January 2022.

Monthly inflation data, specifically the Consumer Price Index (CPI) year-on-year percentage, for the entire working sample were obtained from the State Statistics Service of Ukraine. Table 1 presents descriptive statistics of the parliamentary attention proxy for the full sample, alongside those for the two aforementioned stable sub-samples.

Given Ukraine's historically high average inflation rate of 12.3 percent (Table 1), and the documented positive relationship between mean inflation and attention thresholds (Korenok et al., 2023), we anticipate the parliamentary attention threshold in Ukraine to be relatively high. Table 1 also reveals that the median parliamentary attention index for the full sample (0.511 percent) closely aligns with the medians observed in the two stable sub-samples (0.475 percent and 0.379 percent). Conversely, the standard deviation in these calm periods (0.455 percent and 0.551 percent) is approximately three times smaller than the full-sample volatility (1.309 percent). This consistency in central tendency coupled with significantly lower volatility suggests a stable baseline attention level during non-crisis times, thereby supporting the use of these sub-samples for precise threshold estimation.

Table 1. Descriptive statistics

Variable (monthly)	Sample span	N	Mean	Median	Std. dev.	Min	Max
Eligible speeches per month	2002-2023	244	875.1	957.5	454.7	4	2,227
Parliamentary attention index (% of speeches with "inflation")	2002-2023	244	0.84	0.51	1.31	0	12.75

Parliamentary attention index – Stable 1	2002-2007	58	0.56	0.48	0.46	0	1.71
Parliamentary attention index – Stable 2	2017-2022	59	0.51	0.38	0.55	0	2.98
CPI (y/y %)	2002-2023	244	12.3	10.1	11.2	-1.2	60.9

Notes: The full sample analyzed covers the period from May 2002 to November 2023. Stable sub-samples are defined as May 2002–September 2007 and January 2017–January 2022. Inflation is measured as the year-on-year change in the Consumer Price Index (CPI), sourced from the State Statistics Service of Ukraine. The parliamentary attention index represents the monthly proportion of speeches in the Verkhovna Rada (Ukrainian Parliament) that explicitly mention "inflation," derived from ParlaMint transcripts. Speeches shorter than 50 words were excluded from this calculation.

To reduce volatility and noise in the parliamentary attention proxy, we also compute 3-, 6-, and 12-month simple moving averages as alternative measures and for robustness checks. An example of the 3-month moving average series is shown in Figure 2. The 6- and 12-month moving average series are presented in Figures A.2 and A.3 of the Online Appendix, respectively.

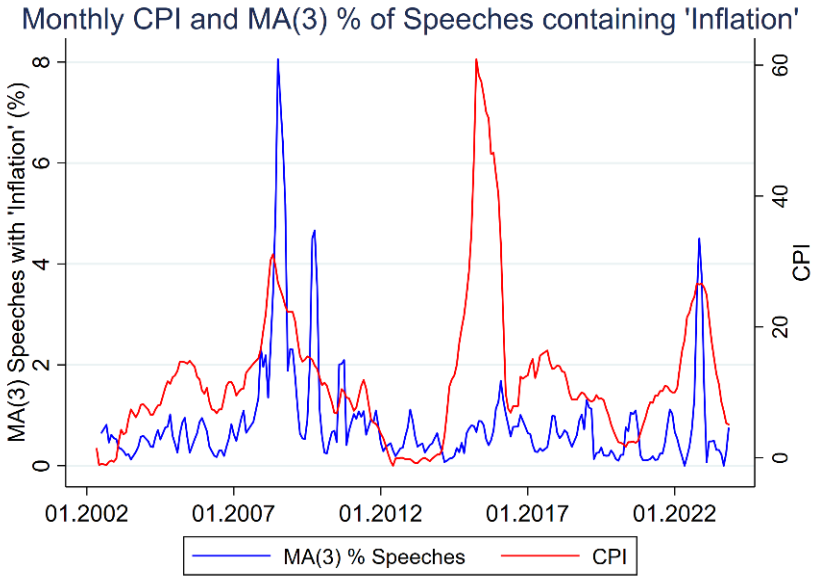

Figure 2. Monthly CPI and MA(3) percent of speeches containing "inflation"

Notes: The lines in the figure illustrate the monthly Consumer Price Index (CPI), plotted on the right axis, and the 3-month moving average of the proportion of Ukrainian parliamentary speeches mentioning "inflation," shown on the left axis. This moving average technique helps to smooth out short-run noise in the attention proxy and serves as a robustness check in the analysis.

It is worth noting that simply counting mentions of "inflation" might overlook other signals embedded in parliamentary speeches; our proxy does not distinguish between positive, negative, or neutral references. Instead, it captures only the salience of inflation in the discourse, showing

when policymakers choose to raise the topic in any form. Implicit in this approach is the assumption that any mention reflects an awareness of inflation's level and thus a decision to dedicate attention to it. Future work could enrich this measure by incorporating sentiment analysis or topic modeling to unpack various framing effects.

4. Results Discussion

The threshold regression analysis is conducted in two distinct stages. First, this study identifies the breakpoint that delineates different attention regimes within two predefined stable sub-samples: May 2002 to September 2007, and January 2017 to January 2022. These specific intervals were chosen because neither significant security concerns nor major currency shocks dominated the parliamentary agenda during these times.

Second, each calm window is progressively extended month-by-month to gradually incorporate successive crisis episodes. These include the global financial crisis (October 2008 – December 2009), the period of russian aggression and currency turmoil (February 2014 – December 2016), and the full-scale invasion (February 2022 – November 2023). This rolling expansion demonstrates that once periods of turmoil enter the sample, the estimated attention threshold rises, initially reaching the mid-teen range and eventually approaching 25 percent CPI. This illustrates how competing headlines can steadily push upward the apparent trigger for parliamentary attention. This observation aligns with the findings of Djerf-Pierre (2012) and Park (2012), who demonstrate that surges in attention to large external shocks, such as wars or financial crises, mechanically displace coverage of inflation and other economic indicators.

For the most recent stable sub-period of January 2017 – January 2022, as Figure 3 shows, the parliamentary-speech metric yields a threshold at 8.8 % CPI ($p = 0.182$)[4]. The observed pattern is characterized by a spike-and-plateau dynamic: below the identified threshold, the proportion of speeches mentioning "inflation" remains nearly flat (approximately 0.2–0.4%) even as CPI fluctuates from four to eight percent. Once CPI exceeds 8.8%, the proportion jumps significantly but does not exhibit any sustained upward drift; observations beyond the threshold range from zero in some months to almost three percent in others. Thus, policymakers' attention rises sharply as inflation approaches double-digit figures and then levels off, thereby providing a benchmark against which public search results can now be compared. This spike-and-plateau behavior

[4] Re-estimating the threshold using the three-month moving average of the parliamentary attention index lowers the p-value to 0.044, thus confirming statistical significance. The complete results are presented later in this section and in Figure A.7 of the Online Appendix.

resembles patterns documented for Estonia, Greece, Brazil, and Colombia[5], which are emerging market economies serving as closer peers to Ukraine, distinguishing it from the more gradual responses often observed in advanced economies.

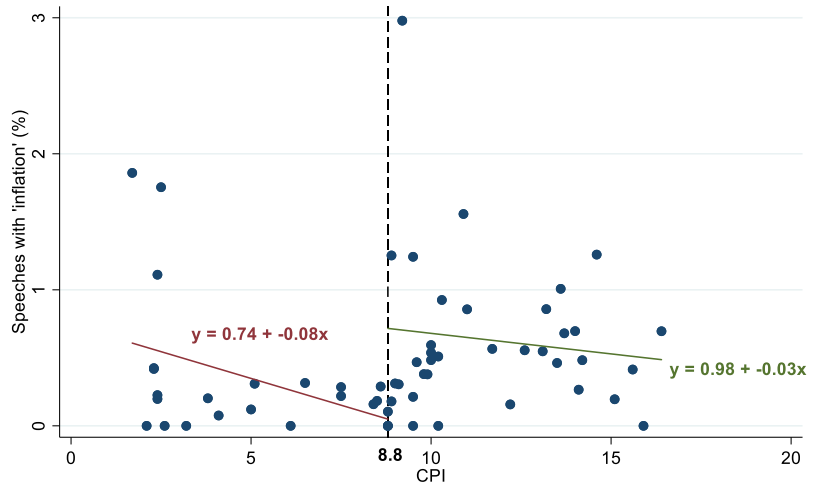

Figure 3. Model results for parliamentary attention (Jan 2017 – Jan 2022)

Notes: The vertical axis represents the proportion of parliamentary speeches mentioning "inflation," while the horizontal axis indicates the Consumer Price Index (CPI). Solid lines depict the fitted values derived from the threshold regression; the dashed vertical line indicates the estimated threshold at 8.8% CPI. Equations adjacent to the lines display the estimated coefficients: at the threshold, the fitted proportion of speeches rises from $0.74 - 0.08 \times 8.8 \approx 0.04\%$ to $0.98 - 0.03 \times 8.8 \approx 0.72\%$.

A comparison of the parliamentary estimates with the Google Trends index for the same 2017–2022 period (Homeniuk, forthcoming), presented in Figure A.4 of the Online Appendix, reveals both similarities and differences. The public attention proxy indicates a breakpoint at 9.9% CPI, which is even closer to the double-digit threshold. Up to this threshold, the seasonally adjusted Google Trends index exhibits a gradual upward drift, whereas parliamentary attention remains nearly flat within the 4–8% inflation range. At the breakpoint, attention spikes in both series, with a relatively larger jump observed in the parliamentary data. In contrast to most findings in the literature, neither series continues to rise after crossing the threshold; instead, interest recedes during the subsequent months. Another distinct difference is the presence of an additional peak in parliamentary mentions at the lowest inflation observations. This pattern is evident in the current period and also recurs in another stable period, but it is not observed in the Google Trends data.

This behavior, distinct from the general public's attention, which, as evidenced by Google Trends, remains stable at low inflation rates, can likely be attributed to two alternative reasons. The first plausible explanation is that policymakers may possess a heightened awareness of potential

[5] More details in Appendix A, Figure A.1 from Korenok et al., 2023

macroeconomic risks associated with very low inflation or deflationary pressures. Both modern economic theory and empirical evidence highlight that prolonged periods of low inflation often serve as a symptom of depressed aggregate demand and an extended economic slowdown. Should such episodes persist, they can further accelerate into a deflationary spiral, thereby posing significant risks to macroeconomic stability. From this perspective, more frequent mentions of inflation by policymakers at these low inflation levels may reflect precautionary intentions aimed at drawing attention to these potential risks.

An alternative explanation for policymakers' heightened attention to low inflation rates is their potential desire to highlight such levels as a positive economic signal. From this perspective, mentions of low inflation could serve to emphasize favorable economic conditions and support messages concerning economic stability. Low inflation may also afford policymakers greater latitude to implement measures aimed at stimulating demand or increasing public spending, as such policies are more readily pursued when inflationary pressures are minimal. Some deputies may additionally reference very low inflation in a more populist manner, leveraging the figure to claim credit for past policy measures or to justify expansive promises. Further research, particularly incorporating sentiment analysis of parliamentary speeches, could help clarify whether these references express caution regarding potential risks or highlight the benefits of price stability.

To further assess the robustness of these findings in stable macroeconomic environments, similar to the period of January 2017 to January 2022, the same estimation procedure was applied to an earlier sample. This earlier sample commences in May 2002, which marks the earliest available period for parliamentary mentions data. As illustrated in Figure 4, when the sample end date is set at September 2007 (the quarter immediately preceding the onset of the global financial crisis), the estimated threshold is 9.8%, with a p-value of 0.030, indicating statistical significance. Crucially, the form of the relationship between inflation and attention is highly similar to that observed during the January 2017 to January 2022 period. A discernible spike in attention appears around the 10% threshold, subsequently leveling off. However, the threshold estimates begin to change significantly when the sample end date extends beyond 2007, progressively incorporating the onset of the global financial crisis and the accompanying surge in inflation.

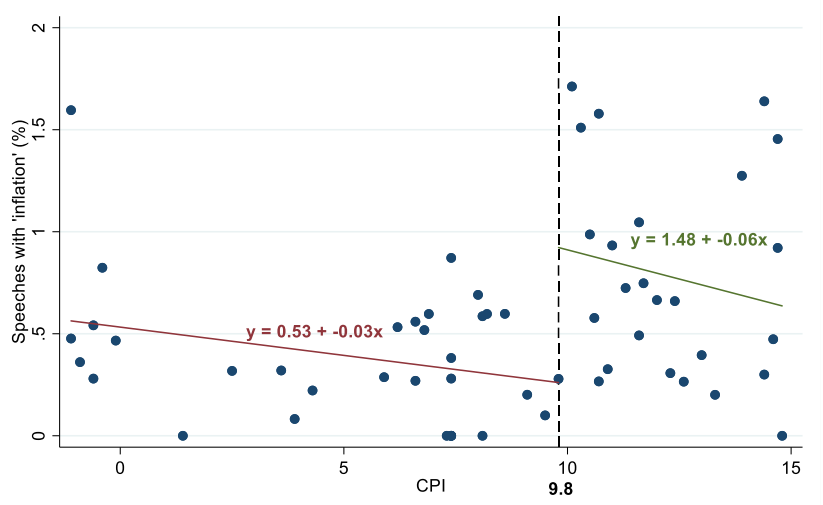

Figure 4. Model results for parliamentary attention (May 2002 – Sep 2007).

Notes: The vertical axis represents the proportion of parliamentary speeches mentioning "inflation," while the horizontal axis indicates the Consumer Price Index (CPI). Solid lines depict the fitted values derived from the threshold regression; the dashed vertical line indicates the estimated threshold at 9.8% CPI. Equations adjacent to the lines display the estimated coefficients: at the threshold, the fitted proportion of speeches rises from $0.53 - 0.03 \times 9.8 \approx 0.24\%$ to $1.48 - 0.06 \times 9.8 \approx 0.89\%$.

As an additional robustness check, the end date was fixed at January 2022 while the start date was progressively advanced, thereby revealing the sensitivity of threshold estimates to sample composition. As Figure 5 illustrates, the breakpoint remains consistently near 9–10 percent as long as the sample window excludes the 2014–2016 currency and geopolitical shock. However, once that turbulent episode is included, the estimates become erratic. This reflects how acute crises divert parliamentary focus from inflation toward more urgent issues, thereby weakening the underlying inflation–attention relationship.

Similarly, fixing May 2002 as the starting point and progressively extending the end date month by month provides another robustness check on temporal stability. Up to November 2008, the threshold remains approximately 9.8 percent; thereafter, it climbs into the mid-teens and eventually approaches 26.2 percent as the global financial crisis and subsequent disruptive events are incorporated into the sample (Figure 5). Collectively, these rolling-window exercises confirm that the 8.8–9.8 percent estimate is robust during calm periods but systematically rises whenever disruptive events are encompassed.

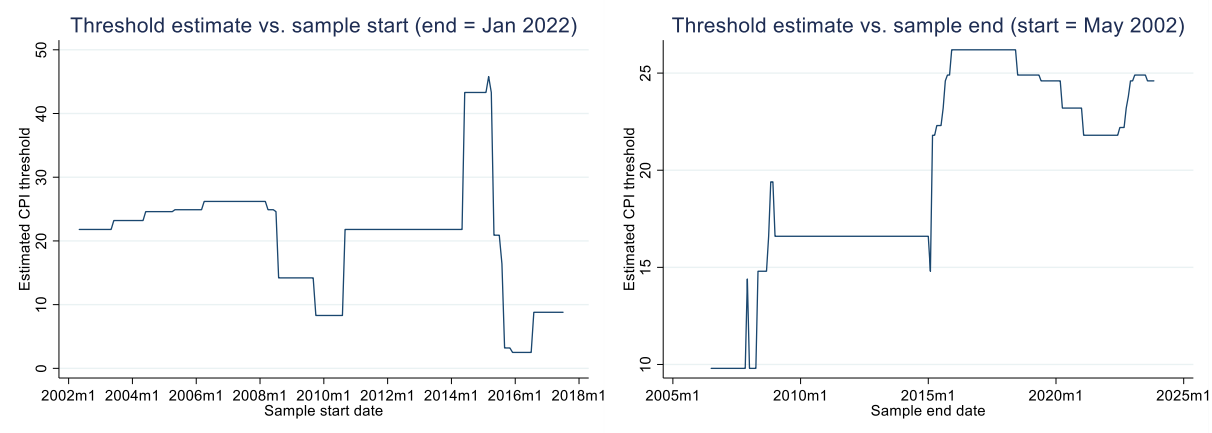

Figure 5. Threshold estimates with varying sample start (end fixed at Jan 2022) – on the left; with varying sample end (start fixed at May 2002) – on the right

Notes: The left panel illustrates threshold estimates when the end date is fixed at January 2022 and the start date is progressively advanced; the right panel depicts estimates when the start date is fixed at May 2002 and the end date is progressively extended. Each line represents the CPI threshold estimated from parliamentary speeches for the corresponding sample window. The threshold remains approximately 10 percent until the 2014–2016 period enters the left panel and the 2008–2009 period enters the right panel. Once these crisis periods are included, the threshold rises sharply and becomes unstable. While a single threshold value does not fully capture complex attention dynamics, such elevated values inherently render the estimates unsuitable for practical policy work.

The radical shift in the threshold suggests a change in how inflation is reflected in parliamentary attention during and after major economic disruptions, such as the global financial crisis. It potentially indicates a breakdown in the typical threshold mechanism observed in more stable periods. This shift is also consistent with findings in Korenok et al. (2023), who document a strong positive correlation between a country's inflation attention threshold and its average inflation level. In this context, sharp inflationary shocks not only disrupt attention dynamics in the short term but also raise the average inflation level, which in turn may contribute to the upward shift in the estimated threshold.

This observation raises the question of whether the observed volatility in threshold estimates stems from genuine shifts in attention dynamics or from short-term noise inherent in the attention measure itself. To address this concern, 3-, 6-, and 12-month moving averages are applied to the parliamentary attention index. These smoothed series yield more stable threshold estimates in the rolling-window analysis. As shown in Figure 6 (MA(12)) and Figures A.5 and A.6 of the Online Appendix (MA(3) and MA(6)), subsamples commencing between January 2010 and December 2018 (all ending January 2022) exhibit thresholds oscillating closer to 10 percent, although a singular clear pattern does not distinctly emerge. During the stable periods, these smoothing approaches preserve the characteristic "spike-and-plateau" pattern while simultaneously lowering the p-values of the estimated thresholds. Specifically, for the 2017–2022

period, using MA(3) as the attention proxy (Figure A.7 of the Online Appendix) yields a threshold of 8.5 percent with a p-value of 0.044.

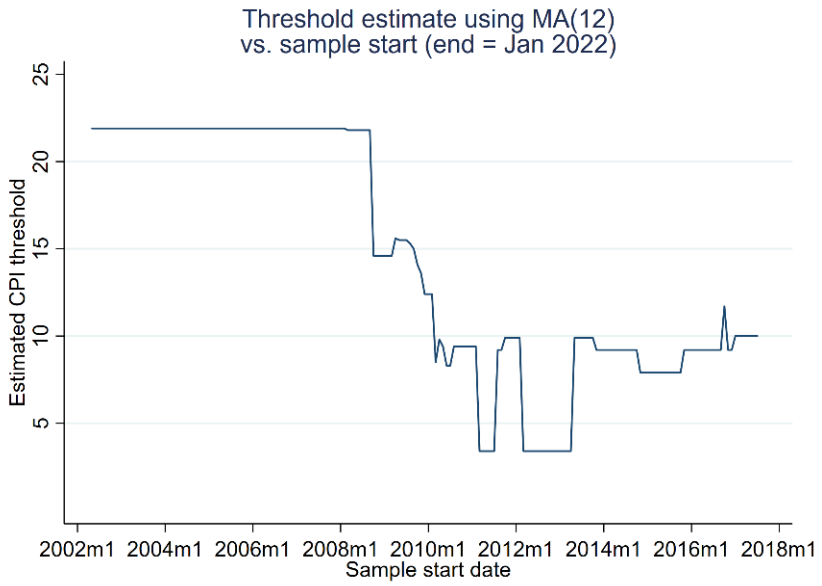

Figure 6. Threshold estimates using MA(12) with varying sample start (end fixed at Jan 2022)

Notes: The end date is fixed at January 2022, while the start date is progressively advanced. Thresholds are estimated using the 12-month moving average of parliamentary "inflation" mentions to mitigate noise. Results remain consistently near 10 percent until the 2014–2016 crisis period is incorporated, after which the threshold increases, albeit less erratically than observed in Figure 5. Even with smoothing, these elevated values do not yield policy-relevant information.

Overall, despite relying on different measures of attention, both the general public and policymakers exhibit similar inflation attention thresholds, estimated at around the 9–10% level, beyond which their attention to inflation begins to shift. However, their behavior around this threshold differs. For the general public, attention rises noticeably as inflation approaches the threshold and then slowly fades or stalls at higher levels. For policymakers, when using the smoothed 12-month moving average of parliamentary attention, which yields more robust results, attention also gradually rises before the threshold, but declines once inflation surpasses it. These different patterns suggest that while both groups respond to a similar inflation threshold around 9–10%, the way their attention changes around this point may differ.

When we extend the sample to include crisis years, threshold estimates become highly unstable, drifting upward as competing issues crowd out inflation in parliamentary debate. This volatility echoes the agenda-space literature on issue-attention cycles, where urgent topics like conflict or financial turmoil displace economic concerns (Downs, 1972; Djerf-Pierre, 2012). In those turbulent periods, inflation must reach much higher levels before regaining salience – a dynamic our rolling-window results capture and that reinforces the need to focus threshold estimation on calmer sub-samples.

5. Conclusions

This paper introduces a novel institutional proxy for inflation attention: the share of Ukrainian parliamentary speeches mentioning “inflation.” It then uses threshold regression to estimate the point at which policymakers noticeably shift their focus. Across two stable sub-samples (May 2002–September 2007 and January 2017–January 2022), the estimated parliamentary attention threshold consistently falls within the 8.8–9.8 percent range. This finding closely aligns with the earlier Google Trends-based public threshold, reinforcing the idea that both legislators and households perceive double-digit inflation as a salient boundary. The parliamentary series also uncovers an additional attention peak at low inflation rates (around 2–3 percent), suggesting that lawmakers may spotlight very low inflation either to flag deflationary risks or to signal favorable price stability, an effect absent from public search data.

Rolling-window exercises demonstrate that including crisis years (the global financial crisis, the 2014–16 shocks, and the 2022 invasion) pushes the apparent threshold sharply higher, reflecting how competing agenda items crowd out inflation in parliamentary debate. Smoothing the attention index with 3-, 6-, and 12-month moving averages improves the statistical significance of break estimates and preserves the core “spike-and-plateau” pattern in stable periods. These robustness checks underscore the importance of focusing on non-crisis windows for precise threshold identification. They also confirm that our estimates capture policy-relevant behavior rather than statistical artifacts driven by extreme inflation episodes.

From a policy standpoint, knowledge of the inflation attention threshold offers a clear signal for the National Bank of Ukraine. Pre-emptive monetary tightening before inflation approaches 9 percent can help contain persistence, support expectation anchoring, and reduce the economic and political costs associated with delayed intervention. While parliamentary speech salience cannot be tracked in real time, the estimated attention threshold nonetheless offers practical value. It assists the National Bank of Ukraine in anticipating when inflation is likely to regain prominence in both public and policy discussions. In autumn 2024, as inflation approached the estimated threshold, these insights supported internal communication planning aimed at shaping the broader narrative before public attention intensified.

Future research could extend this framework by incorporating speech sentiment analysis to distinguish between positive and negative framing, examining attention to currency depreciation alongside inflation, or applying the parliamentary-mentions proxy to other institutional contexts where search-based measures prove unreliable.

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Online Appendix

Figure A.1 visualizes the complete set of Ukrainian parliamentary transcripts from the CLARIN ParlaMint corpus. Monthly speech counts exhibit considerable variation, declining during recess periods and increasing during politically active months. The 12-month moving average smooths these fluctuations and reveals the underlying trend. A sharp decline in parliamentary activity following the full-scale invasion justifies the exclusion of that period to avoid bias in the analysis.

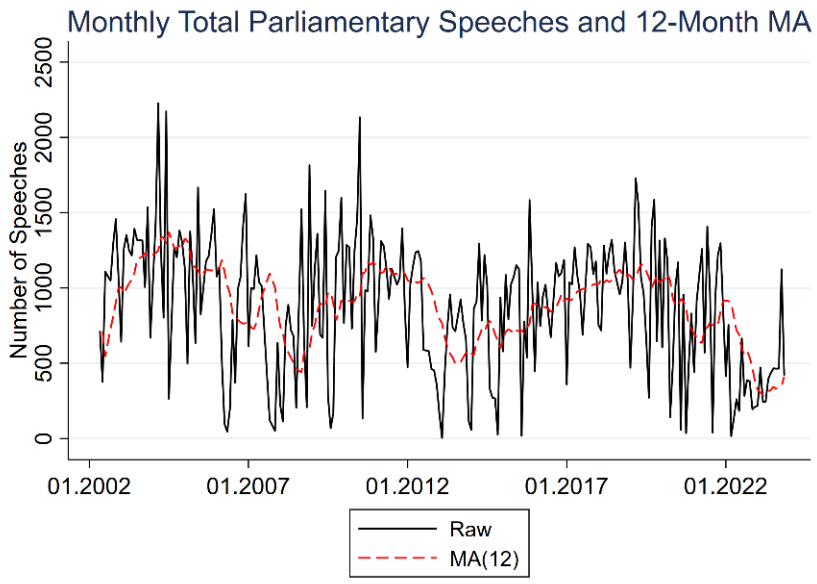

Figure A.1. Number of monthly total parliamentary speeches in Ukraine and 12-month moving average (May 2002–Nov 2023)

Notes: The solid black line represents the monthly number of eligible speeches, while the red line plots the 12-month moving average. Months with zero speeches, typically corresponding to summer recesses or election periods, are excluded from the database; consequently, only months with at least one recorded speech are displayed.

Months with 0 speeches in parliament in the observed sample: 08.2002, 08.2003, 01.2004, 08.2004, 08.2005, 07.2007, 08.2007, 10.2007, 08.2008, 08.2011, 08.2012, 08.2013, 08.2016, 08.2017, 08.2018.

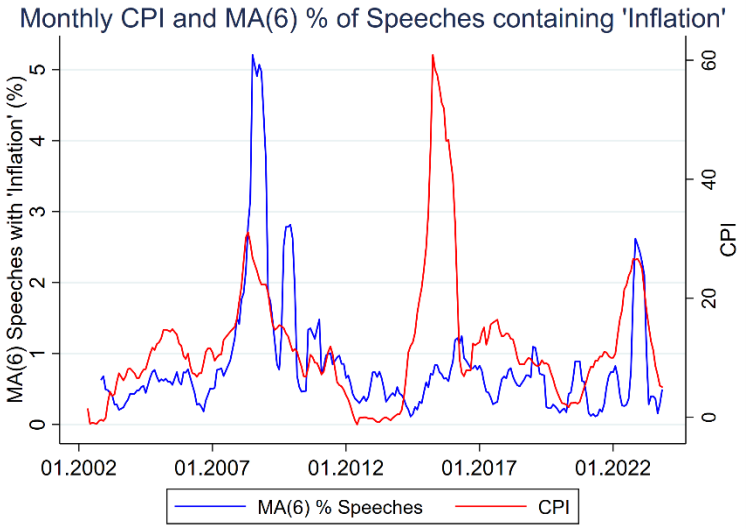

Figure A.2. Monthly CPI and MA(6) percent of speeches containing “inflation”

Notes: The lines illustrate the monthly Consumer Price Index (right axis) and the 6-month moving average of the proportion of Ukrainian parliamentary speeches that mention "inflation" (left axis). This longer moving average further smooths short-run noise and serves as an additional robustness check.

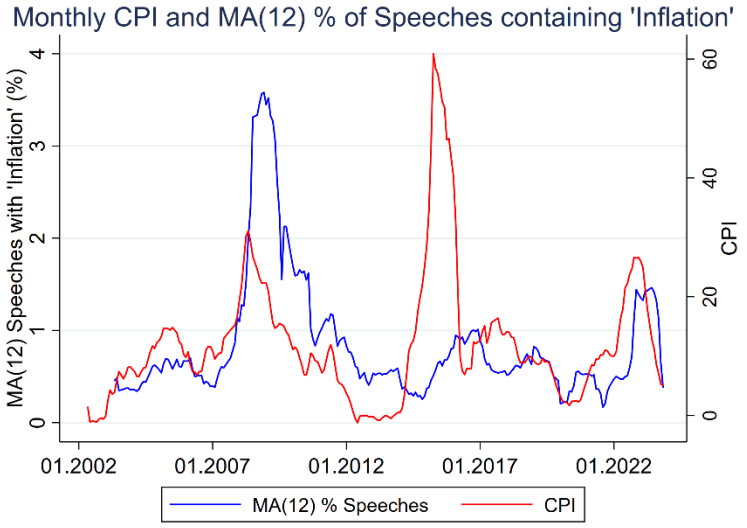

Figure A.3. Monthly CPI and MA(12) percent of speeches containing “inflation”

Notes: The lines illustrate the monthly Consumer Price Index (CPI) (right axis) and the 12-month moving average of the proportion of Ukrainian parliamentary speeches that mention “inflation” (left axis). This annual moving average effectively filters out most short-term fluctuations and provides a long-horizon robustness check.

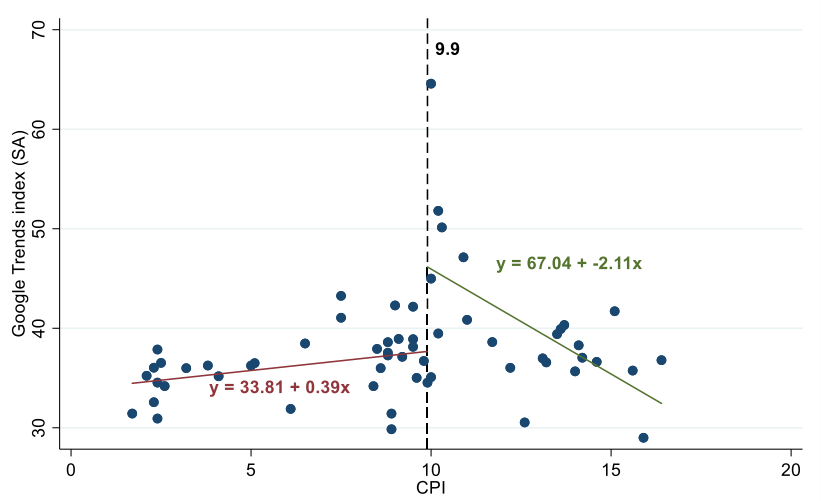

Figure A.4. Model results for Google trends attention (Jan 2017 – Jan 2022)

Notes: The vertical axis plots the seasonally adjusted Google Trends index for "inflation" searches in Ukraine, while the horizontal axis shows the Consumer Price Index (CPI). Solid lines give fitted values from the threshold regression, and the dashed vertical line marks the estimated threshold at approximately 9.9% CPI. Absolute coefficients may differ slightly from those reported in Homeniuk (forthcoming) due to Google Trends data being rescaled when the display window changes; however, the relative jump and slopes on either side of the threshold remain consistent.

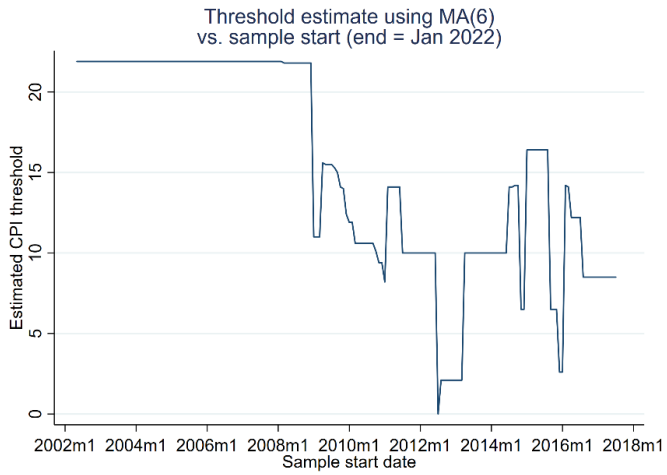

Figure A.5. Threshold estimates using MA(6) with varying sample start (end fixed at Jan 2022)

Notes: The end date is fixed at January 2022, and the start date is progressively advanced. Thresholds are estimated using the 6-month moving average of parliamentary "inflation" mentions to mitigate noise. The threshold remains close to 10 percent until the 2014–2016 crisis period is incorporated; thereafter, it climbs and becomes less stable, although still smoother than observed in Figure 5. These elevated values are not helpful for policy.

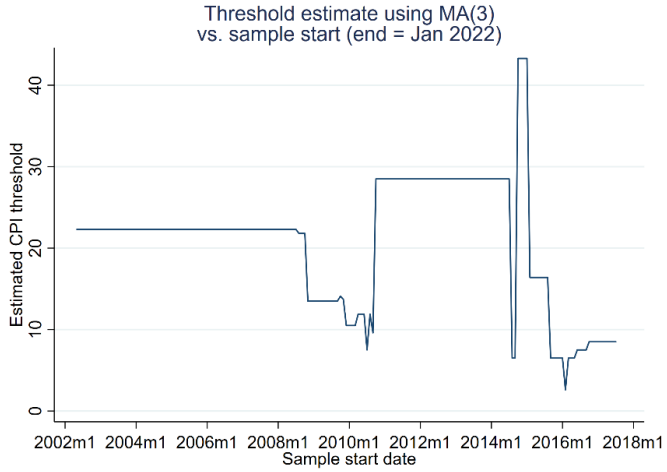

Figure A.6. Threshold estimates using MA(3) with varying sample start (end fixed at Jan 2022)

Notes: The end date is fixed at January 2022, and the start date is progressively advanced. Thresholds are estimated using the 3-month moving average of parliamentary "inflation" mentions. Results remain near 10 percent until the 2014–2016 period appears, after which the threshold rises sharply and exhibits greater volatility than in Figures 6 and D.1. Even with this smoothing, the elevated numbers are not useful for policy work.

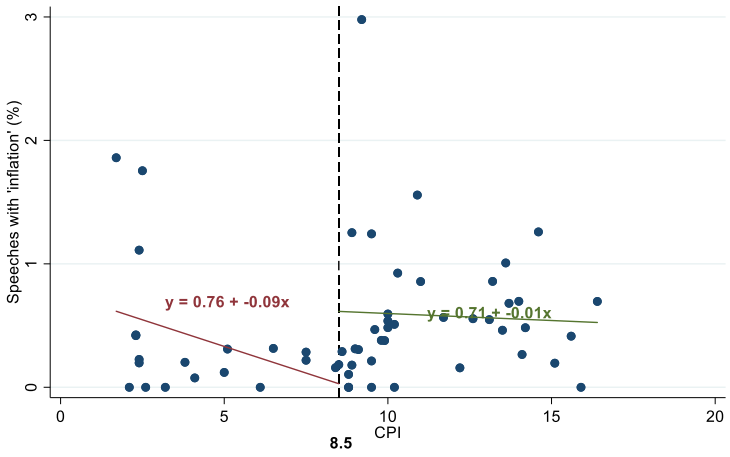

Figure A.7. Model results using parliamentary attention (3-month MA, Jan 2017 – Jan 2022)

Notes: The vertical axis represents the 3-month moving average of the proportion of parliamentary speeches mentioning "inflation," while the horizontal axis indicates the Consumer Price Index (CPI). Solid lines depict the fitted values derived from the threshold regression; the dashed vertical line indicates the estimated threshold at approximately 8.5% CPI. Equations adjacent to the lines display the estimated coefficients: at the threshold, the fitted proportion of speeches rises from $0.76 - 0.09 \times 8.5 \approx 0.00\%$ to $0.71 - 0.01 \times 8.5 \approx 0.63\%$.