

CONSUMER BEHAVIOR AROUND SALIENT SWEDISH MACROECONOMIC ANNOUNCEMENTS

AN EMPIRICAL STUDY

SEBASTIAN CASAS-BONDE
EDVARD OXELSTRÖM

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Saliency and Macroeconomic Information: How Household Attention Influences Consumption around unemployment and Interest Rate Announcements

Abstract:

This paper investigates whether Swedish household consumption changes around salient macroeconomic announcements. Using transaction-based data from Statistics Sweden from 2019 to 2026, we study SCB unemployment rate announcements and Riksbank interest rate announcements. We proxy saliency with Google Trends search intensity for arbetslöshet (unemployment) and ränta (interest rate), with which we construct six-month saliency maxima and estimate event-studies and regression models. Pooled estimates show that both announcement types are associated with changes in consumption within ± 14 day event windows. Directional tests isolating the most salient announcements show that announcements indicating falling unemployment are associated with consumption response, whereas rising unemployment and interest rate announcements show weaker associations. By comparison, fundamentals-based maxima for unemployment announcements, following Garmaise, Levi, and Lustig (2024), are negatively associated with consumption response. Our findings suggest that Google Trends may capture more active information search around positive labor-market news than around monetary policy news, while unemployment-rate-based maxima may capture passively processed, severe labor-market news.

Keywords:

Finance; Behavioral Finance; Household Consumption; Consumption Dynamics; Macroeconomic Announcements

Authors:

Sebastian Casas-Bonde (26161)
Edvard Oxelström (26099)

Tutor

Paula Roth, Postdoc Fellow, Swedish House of Finance

Examiner

Ramin Baghai, Professor, Department of Finance

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Stockholm School of Economics

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I. Introduction

Herbert Simon argued that in an information-rich world, attention is scarce.¹ When viewed at the household level, attention constraints may undermine assumptions in standard consumer theory that households form rational expectations and smooth consumption over time (Kimball, 1990; Ganong and Noel, 2019). Building on this, household consumption may respond not only to fundamentals but also to whether macroeconomic releases become salient enough to capture households' limited attention. Therefore, in our paper we examine whether Swedish household consumption responds to unemployment and interest rate announcements, and whether attention, or salience, amplifies consumption responses around these announcements.

Garmaise, Levi, and Lustig (2024) show that discretionary spending in the United States falls after local unemployment rate announcements that report a 12-month maximum unemployment rate. These findings suggest that unemployment announcements near local peaks (near-max), and announcements initially reported as record highs but later revised away (false-max), are both followed by a decrease in discretionary spending. They interpret these results as evidence that the salience of unemployment news affects discretionary spending. This motivates our use of salience as a potential channel through which macroeconomic information may affect Swedish household consumption.

Less is known about how continuous attention measures relate to household consumption responses around different types of macroeconomic announcements. In light of this we make four key contributions. First, we change the setting to Sweden, where a large share of households have variable-rate mortgages. Second, we investigate both interest rate announcements from the Riksbank and unemployment rate announcements from Statistics Sweden (SCB) to compare consumption around two macroeconomic topics. Third, inspired by Da, Engelberg, and Gao (2011), we use Google Trends search intensity as a proxy for household attention and interact it with both types of macroeconomic announcements to investigate whether continuous attention is associated with stronger consumption responses around announcements. Fourth, we test whether consumption response varies by announcement direction, separating unemployment announcements and interest rate announcements by sign. We investigate this through two research questions:

1. Does Swedish household consumption change around unemployment and interest rate announcements?
2. Does salience amplify consumption response around announcements, and is response state-dependent and symmetric across directions?

Our research questions are interesting and policy-relevant as household consumption is a major driver of economic activity and household welfare. Short-run spending response around unemployment and interest rate announcements can therefore affect both the economy and household well-being. Sweden is a useful environment for examining household consumption response since Swedish households are, on average,

¹In his famous essay *Designing Organizations for an Information-Rich World*, see Simon (1971)

highly leveraged and a large share hold variable-rate mortgages². This may increase household sensitivity to interest rate announcements compared to other countries.

Our sample data consist of years 2019 to 2026, a period that includes unemployment shocks, inflation, and Riksbank rate hikes following the Covid-19 pandemic. The dependent variable consists of the transaction-based daily Swedish household consumption index from SCB. Independent variables consist of unemployment statistics release dates from SCB, and interest rate meeting dates from the Riksbank. Inspired by Da et al. (2011), we use Google Trends search frequency to construct a salience proxy by averaging daily Google Trends search intensity for the keywords *arbetslöshet* (unemployment) and *ränta* (interest rate) over a ± 7 -day window around each announcement date. We identify especially salient unemployment rate and interest rate announcements by whether they reach a six-month Google Trends search intensity maximum for respective keywords. We also identify unemployment announcement peaks by whether they reach unemployment rate-based maxima in line with Garmaise et al. (2024).

Our empirical method consists of two parts. First, we conduct an event study to investigate how Google Trends search-intensity-based salience and Swedish household consumption change around unemployment rate and interest rate announcement dates. Here, we descriptively examine whether attention and consumption changes around announcement dates, and whether estimates vary across window lengths. Second, we regress 14-day log consumption on announcement dates and salience measures, while controlling for calendar fixed effects and macroeconomic conditions. These regressions show whether salience amplifies consumption around announcement dates, whether the association between announcements and consumption is concentrated in those that reach six-month salience maxima, and whether this association further depends on direction.

Our baseline regressions show that unemployment and interest rate announcements are significantly and positively associated with consumption response within our ± 14 -day window. Our most important finding is that, after splitting both announcement types by direction, only announcements indicating falling unemployment are significantly associated with consumption response. Interest rate announcements of either direction have no significant association with consumption. We interpret this asymmetry as consistent with a buffer-stock model (Carroll, 1997), in which accumulated savings may shield households from short-term economic downturns, while improving labor market conditions reduce perceived risk, thereby incentivizing households to spend excess buffers. This asymmetry persists: announcements indicating falling unemployment that reach a six-month salience maximum are positively and statistically significantly associated with consumption response, whereas announcements indicating rising unemployment that reach a six-month salience maximum are not significantly associated with consumption response. However, unemployment announcements that reach unemployment rate-based six- and twelve-month maximums are negatively and statistically significantly associated with consumption response. We interpret this contrast of significance for maximum estimates as a distinction between active and passive attention, consistent with the Ostrich Effect (Karlsson,

²As outlined in reports Finansinspektionen (2025)

Loewenstein, and Seppi, 2009), where our Google Trends salience measure captures active information search in response to good news, but fails to capture household response when passively exposed to bad news. Finally, all estimates are conditional associations rather than causal effects due to a small number of event dates. The limited number of event dates reduces statistical power and makes these threshold-based estimates sensitive to window length, as further elaborated in our robustness analysis.

Our findings illustrate how macroeconomic communication is associated with household behavior by showing that consumption responses are not uniform around announcement types. Consumption responses differ around announcements depending on whether they capture sufficient attention, and on their directional content. Therefore, the framing and timing of unemployment and interest rate announcements may affect how information is processed by households.

The remainder of our paper is organized as follows. Section II reviews closely related literature and how we contribute. Section III describes our data sources and the construction of key variables such as the consumption-response and salience measures. Section IV details empirical methodology. Section V presents the main empirical results, beginning with a descriptive event-study, followed by regression results including directional and maxima analyses. Section VI reports robustness and Placebo tests. Section VII concludes.

II. Related Literature

Standard consumption theory models that households smooth consumption in response to expected changes in income over time (Kimball, 1990; Ganong and Noel, 2019). However, this assumes that households are perfectly and continuously processing relevant information. Attention is most likely limited, suggesting that macroeconomic announcements may only influence consumption when they become salient enough for households to notice and process ³.

A large body of literature shows that households update beliefs infrequently. Carroll (2003) models that households intermittently update their beliefs through news, implying that macroeconomic information spreads slowly across households. Similar to this view of slow information diffusion, Sims (2003) models that rational inattention limits information-processing capacity among agents. The attention literature also provides evidence of asymmetric consumption response. Christelis et al., 2019 shows that household consumption responds more strongly to negative transitory income shocks than to positive shocks.

Examining attention further, Maćkowiak and Wiederholt (2015) investigate how, when information processing is costly, inattention becomes rational as consumers become more selective in what they process. Moreover, Link, Peichl, Roth, and Wohlfart (2023) show that attention is heterogeneous across consumers and state-dependent, with periods of higher inflation associated with increased attention to macroeconomic signals. These studies motivate our approach for testing whether macro announce-

³As illustrated by Stanovich and West (2000) among others.

ments are associated with consumption response response, and whether salience moderates this relationship.

Da et al. (2011) validate our Google Trends search intensity measure as a proxy that captures attention. Moreover, Andrei and Hasler (2014) shows that changes in attention, as measured through search behavior, are associated with higher stock market volatility and risk premia.

Our anchor paper, Garmaise et al. (2024), uses U.S. transaction data to study whether local unemployment announcements that reach unemployment-rate maximums affect discretionary spending. They find that discretionary spending falls following both false and true maxima, but not near maxima, which they interpret as evidence that salience affects consumption.

While prior work shows that local unemployment announcements can affect consumption (Garmaise et al., 2024), there is limited evidence on how these dynamics operate across different macroeconomic announcement types and directions at a national level. We address this gap by using Sweden as a new setting, examining interest rate announcements in addition to unemployment announcements, measuring Google Trends search-based attention, and separating announcements by direction. This approach allows us to compare two macroeconomic attention channels, identify asymmetries in response, and determine whether search-based salience is associated with consumption response.

III. Data

The dataset spans from January 1, 2019, to February 1, 2026. It consists of the Swedish Riksbank’s policy interest rate (IR), recorded on each interest rate announcement date, and SCB’s monthly unemployment announcements (U), measured in percentage points. The Swedish Riksbank holds meetings 5 to 8 times a year to discuss and announce interest rate policy, and the effective interest rate is usually implemented between a day and a week after the meetings. We have chosen to record the dates of the meetings and not of the effective change, which are published in the Riksbank’s *Penningspolitiska beslut*. SCB announces unemployment rates for the previous month; we account for this delay by recording the release date as corresponding to the previous month.

Macroeconomic controls include a monthly inflation series (I), calculated as the year-over-year percentage point change. Public attention is captured via daily Google Trends search intensity for the topics *ränta* and *arbetslöshet* in Sweden. Finally, we use daily credit card transaction data (c) as a measure of Swedish household consumption. We obtain IR from the Swedish Riksbank, while U , I , and c are sourced from SCB. Google Trends search-frequency data are collected via the Google Trends API or downloaded directly from their website.

To interpret our estimates as approximate percentage changes, we apply a natural logarithm transformation to daily transaction volumes, c_t . To isolate shifts in consumer behavior around macroeconomic releases, we calculate the difference in average log-consumption between fixed post- and pre-release windows. For a given date t and

a one-sided window length k , we define our primary dependent variable, $\Delta_k \ln(c_t)$, as:

$$\Delta_k \ln(c_t) = \frac{1}{k} \sum_{i=1}^k [\ln(c_{t+i} + 1) - \ln(c_{t-i} + 1)] \quad (1)$$

For brevity, we refer to this average log-difference simply as *consumption* or *consumption response* throughout the remainder of the paper.

Averaging consumption over the pre-release and post-release windows reduces high-frequency noise and captures changes in consumption around announcement dates, including potential anticipation before the release and delayed adjustment afterward. The window length is inspired by our event study analysis (see Section V.1), a similar window used by (Garmaise et al., 2024). However, unlike (Garmaise et al., 2024), we keep the 3 days surrounding the announcement to capture immediate responses inherent in daily transaction data.

The temporal resolution of Google Trends data is dependent on the requested time frame, which means that series over several years must be downloaded in smaller chunks to get daily data. Further, Google Trends normalizes search volume data within each requested time frame between 0 and 100, which means that the raw scale of different time frames is inconsistent.

To construct a consistent, long-term daily search frequency series for the interest rate and unemployment topics $\tau \in \{IR, U\}$, we use a version of splicing. We follow the framework outlined by The International Monetary Fund (2017) and adapt their scaling factor to a 30-day overlap, to mitigate noise in the daily data. Search intensity data was downloaded in n_τ overlapping 210-day segments $\{x_\tau^h\}_{h=1}^{n_\tau}$. Each segment (except $h = 1$) shared a 30-day overlap with the preceding segment, which was utilized to calculate a splice factor, $f_{\tau,h}$, for each segment h :

$$f_{\tau,h} = \frac{\sum_{i=181}^{210} x_{\tau,i}^{h-1}}{\sum_{j=1}^{30} x_{\tau,j}^h}$$

where i and j represent daily index days. Each segment x_τ^h was multiplied by its chain-link factor $f_{\tau,h}$ and subsequently concatenated together. The overlapping dates were removed, and the series was z -scored, resulting in a continuous, consistently normalized salience time series vector $s_{\tau,t}$.⁴

We define the baseline salience for a specific date as the average search frequency over a 14-day window surrounding the date (± 7 days) as:

$$S_{\tau,t} = \frac{1}{15} \sum_{i=-7}^7 s_{\tau,t+i}$$

Averaging the windows prevents daily noise from distorting the results while capturing the total attention surrounding the announcement, similar to Equation 1. Finally, we construct indicator variables to identify high-salience events, defined as 1 if $S_{\tau,t}$ represents a 6-month maximum and 0 otherwise, alongside standard binary indicators for all release dates. An overview of the full dataset is provided in Table I.

⁴See Figure 4 and related analysis for more information and validation.

Table I
Summary Statistics

This table reports summary statistics for all main variables used in the empirical analysis. Saliency for unemployment (S_U) and interest rate (S_{IR}) reflect the z -scored Google Trends search intensity for *arbetslöshet* and *ränta*, respectively, calculated over a ± 7 -day window. $Release_U$ and $Release_{IR}$ are indicator variables equal to one on SCB unemployment release dates and Riksbank interest rate change events, respectively. Unemployment- and interest rate maxima within a 6-month window ($U6M, IR6M$) are also indicator variables, equal to one for release dates that reach 6-month maxima based on S_U or S_{IR} . Macroeconomic controls include the unemployment rate, the effective interest rate change, and inflation. Categorical calendar controls include the day of the month (DoM), day of the week (DoW), and the month of the year ($Month$)

Variable	n	Mean	SD	Min	Max
<i>Dependent Variables & Lags</i>					
$\Delta_3 \ln(c)$	2,582	0.0006	0.1591	-0.8391	0.7188
$\Delta_7 \ln(c)$	2,574	0.0012	0.0814	-0.3221	0.2280
$\Delta_{14} \ln(c)$	2,560	0.0017	0.0738	-0.3008	0.1862
6-day lag ($\Delta_3 \ln(c)$)	2,579	0.0005	0.1592	-0.8391	0.7188
14-day lag ($\Delta_7 \ln(c)$)	2,567	0.0009	0.0813	-0.3221	0.2280
28-day lag ($\Delta_{14} \ln(c)$)	2,546	0.0015	0.0738	-0.3008	0.1862
<i>Independent Variables (Release Dates & Saliency)</i>					
$Release_U$	2,588	0.0328	0.1783	0.0000	1.0000
S_U	2,588	-0.0013	0.9829	-2.0366	5.1341
$U6M$	2,588	0.0085	0.0918	0.0000	1.0000
$Release_{IR}$	2,588	0.0166	0.1278	0.0000	1.0000
S_{IR}	2,588	0.1450	0.9797	-1.2715	4.5624
$IR6M$	2,588	0.0054	0.0734	0.0000	1.0000
<i>Macroeconomic Controls & Seasonality</i>					
U (%)	2,588	8.1009	0.7652	6.7000	9.3000
IR (pp)	2,588	1.3912	1.5908	-0.2500	4.0000
I (%)	2,588	3.5696	3.5415	-0.4000	12.3000
DoM (1-31)	2,588	15.7342	8.8041	1.0000	31.0000
DoW (0-6)	2,588	3.0000	1.9994	0.0000	6.0000
$Month$ (1-12)	2,588	6.4563	3.4810	1.0000	12.0000

Note: Event counts: $Release_U$ (85), $U6M$ (22), $Release_{IR}$ (43), $IR6M$ (14). n varies due to window construction.

Table I shows that announcement dates are rare compared to the number of observations within the full daily panel ($n = 2,588$). $Release_U$ captures 85 event days, while $Release_{IR}$ has 43 event days. High-saliency events are even rarer for $U6M$ and $IR6M$ ($n = 22$ and $n = 14$). While daily frequency provides many observations, the small number of announcements, and even smaller number of high-saliency events, reduces precision for event-specific estimates.

Non-averaged Google Trends search intensity (not shown in the table) differ substantially between U and IR , with mean values 52.8 and 125.70 respectively. To

ensure comparability in interaction estimates, the daily salience series are therefore standardized to z -scores before averaging, which improves scaling and further comparability between S_U and S_{IR} . We therefore interpret S_U and S_{IR} in standard-deviation units, which prevents differences in baseline search volume from hindering consistent interpretations. Finally, the substantial variation in macroeconomic controls during our sample period, specifically the unemployment rate (6.7% to 9.3%) and policy rate changes (-0.25 to 4.0 pp) motivates the inclusion of these variables to capture attention-specific behavior and reduce omitted variable bias.

To further understand the data, the Pearson correlation coefficient ρ between the main variables of interest is computed (displayed in Table II). The strong positive correlation between S_{IR} and IR ($\rho = 0.74$) and I ($\rho = 0.57$) suggests that the interest rate salience reflects the inflation and monetary-policy conditions during the period, while correlations below one implies that our salience variables explain some variation distinct from macro variables. The pronounced correlation value between I and S_{IR} could reflect heightened household attention to interest rate changes, given the large share of leveraged households with floating-rate mortgages. The weaker correlation between $S_{U,t}$ and the macroeconomic controls may indicate that unemployment-related search intensity is influenced by exogenous shocks or news rather than unemployment levels.

Table II
Correlation Matrix

This table reports the Pearson correlation coefficients ρ between the main variables used in our analysis. $\Delta_{14} \ln(c)$ is consumption response, constructed as the trailing 14-day mean of the daily log difference in nominal Swedish household consumption ($\Delta_{14} \ln(c)$). $Release_U$ and $Release_{IR}$ are indicator variables equal to 1 on SCB unemployment release dates and Riksbank interest rate event dates, respectively. S_U and S_{IR} are the standardized (z -scored), ± 7 -day average Google Trends series for *arbetslöshet* and *ränta*, respectively. U denotes the Swedish seasonally adjusted unemployment rate (percent), IR denotes the Riksbank interest rate change (percentage points), and I denotes monthly inflation (percent). The sample covers January 2019 to February 2026

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) $\Delta_{14} \ln(c)$	1.00							
(2) $Release_U$	0.13	1.00						
(3) S_U	0.13	0.01	1.00					
(4) $Release_{IR}$	0.03	0.01	0.02	1.00				
(5) S_{IR}	0.06	0.01	0.14	0.06	1.00			
(6) U (%)	-0.00	-0.00	0.31	0.01	-0.09	1.00		
(7) IR (pp)	-0.02	-0.00	0.08	0.01	0.74	0.08	1.00	
(8) I (%)	0.01	0.00	-0.36	-0.01	0.57	-0.49	0.36	1.00

Notably, $\Delta_{14} \ln(c_t)$ shows a stronger correlation with S_U ($\rho = 0.13$) than to $S_{IR,t}$ ($\rho = 0.06$). Further, there is almost no correlation between release dates ($\rho = 0.01$), which confirms that these events are independent, alongside a modest correlation between S_{IR} and S_U ($\rho = 0.14$). Lastly, the negative correlation between U and I ($\rho = -0.49$) is expected and aligns with standard macroeconomic theory on correlation.

IV. Empirical method

Our empirical method has two parts. First, we investigate the relationship between household consumption and macroeconomic announcements. Second, we conduct regressions relating consumption responses to announcement date indicators, jointly and partitioned by direction. To capture public attention, we regress consumption on a salience proxy based on Google trends and test for threshold effects via isolated high-salience events. Lastly, to contextualize our results, we benchmark results against the fundamentals-based indicators used by Garmaise et al. (2024).

In the first part (section V.A), we conduct an event study. We examine the relationship between release dates and measured salience, descriptive consumption differences in windows surrounding release dates, and how consumption response changes with varying window lengths. We also evaluate whether our salience proxy oscillates around release dates by studying how Google Trends search intensity changes in the ± 7 -day window surrounding release dates.

In the second part (sections V.B–V.D), we conduct regression-based analyses, using the variables defined and discussed in Section III. We control for unemployment, the policy rate, and inflation. We also include categorical fixed effects capturing calendar patterns (day of month, day of week, month, and year). Our main dependent consumption response variable is related to the release-date indicators, and we test whether the effect of salience operates through interaction terms involving release dates or by salience 6-month maximum indicators. We also compare these salience 6-month maxima indicators to unemployment rate-based indicators, as used by (Garmaise et al., 2024) (6- and 12-month maximum unemployment rate announcement dates). We estimate specifications separately for interest rate announcements and unemployment rate announcements, and include joint estimates for robustness. Further, we run regressions where we study increases versus decreases in the underlying macroeconomic outcomes. The baseline specification is as follows:

$$\Delta_{14} \ln(c_t) = \alpha + \beta_1 \text{Release}_{\tau,t} + \beta_2 S_{\tau,t} + \gamma X_t + \delta_t + \varepsilon_t$$

t indexes days and topic is indexed by $\tau \in U, IR$. δ_t denotes calendar effects and X_t contains the macroeconomic controls outlined above. We use Newey-West HAC standard errors in our regressions to address autocorrelation in the daily data.

V. Main Empirical Results

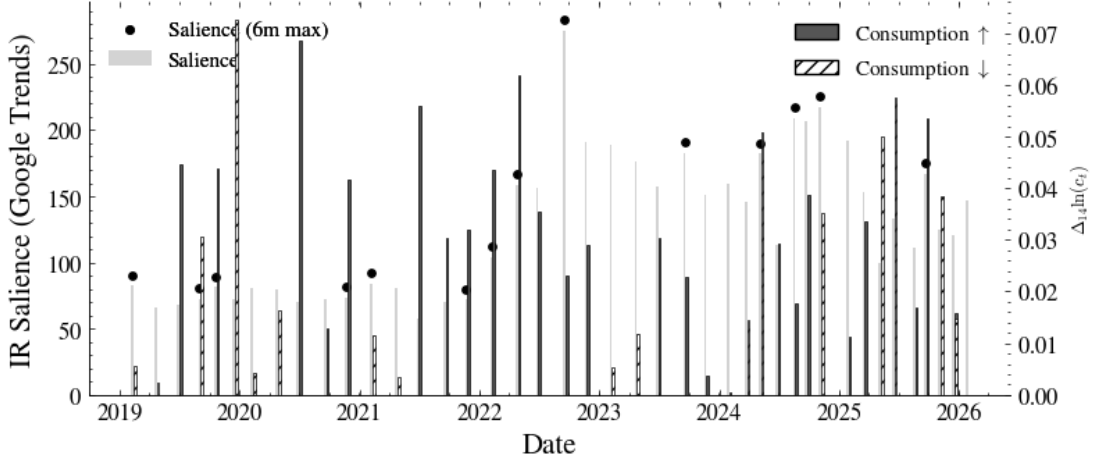
A. Event Study

In this section, we use event-study figures to assess how salience and consumption move around macroeconomic announcement dates. Figure 1 compares Google Trends search intensity-based salience and consumption response for unemployment and interest rate announcements. Figures 2 and 3 subsequently examine whether announcement estimates vary for different event-window length and splitting announcements by direction. These figures provide descriptive evidence only, and complement our regressions in section B.

A.1 Saliency and Consumption around Announcement Dates

We first use an event-study figure to descriptively analyze how consumption and saliency move around announcement dates. An indication of how consumption is associated with saliency and announcement dates can be found in Figure 1.

Panel (a): Consumption change and Saliency for Interest Rate Releases



Panel (b): Consumption change and Saliency for Unemployment Rate Releases

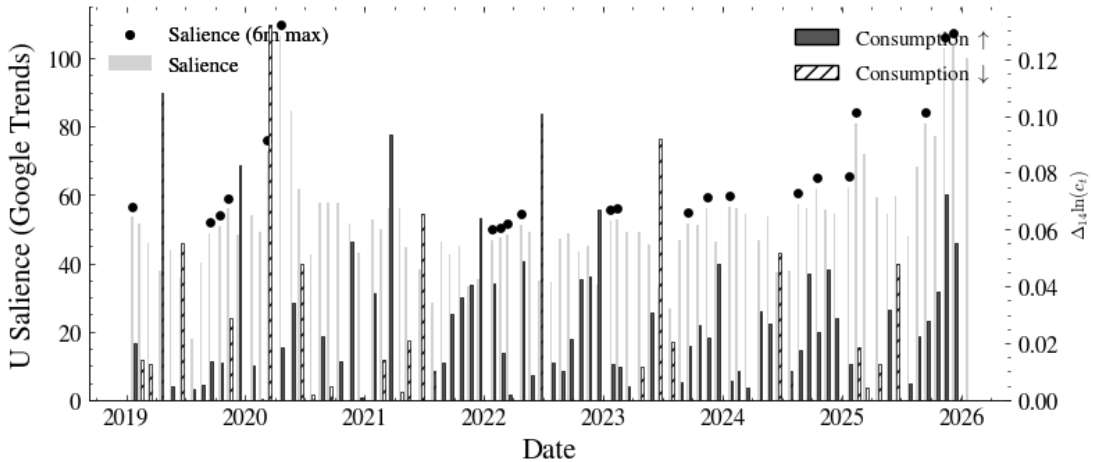


Figure 1: Saliency and Consumption Responses to Economic Announcements. Panel (a) plots Riksbank interest rate event dates and Panel (b) plots SCB unemployment release dates. In both panels, the left y-axis reports non z -scored event-day Google Trends search intensity (S_{IR} for searches with the word *ränta* and S_U for searches with the word *arbetslöshet*), measured using the ± 7 -day window for each corresponding announcement date. The black markers indicate announcements classified as 6-month saliency maxima. The right y-axis conveys the consumption response ($\Delta_{14} \ln(c_t)$), defined as the difference in average log consumption within a ± 14 -day window, constructed using SCB’s transaction-based daily consumption index. Consumption response is adjusted for calendar effects by regressing it on day-of-week, day-of-month, and month fixed effects. Solid and hatched bars represent positive and negative residual consumption responses respectively.

Figure 1 displays substantial variation in Google Trends saliency across the series of announcement dates, and especially for interest rate changes (Figure 1a).

In Panel (a), salience is higher from 2022 onward, in line with post-pandemic inflation. The largest salience spike occurs around the September 2022 interest rate announcement, which was the largest interest rate hike in our sample. These especially salient events in 2022 do not coincide with a uniform consumption response, two are followed by higher residual consumption, while one is followed by lower residual consumption. Collectively, these responses indicate that attention is not associated with short-run household consumption around interest rate announcements.

For Panel (b), Figure 1b displays substantial variation between events, although unemployment salience varies less sharply than the interest rate series. Google Trends search intensity levels are normalized within topic, so the difference in scaling between unemployment and interest rate salience should not be interpreted as one topic being more explanatory than the other. Figure 1 is therefore informative for within-topic variation and six-month salience maxima. Moreover, unemployment 6-month maxima appear more clustered over time, with consumption response direction varying around unemployment announcement dates.

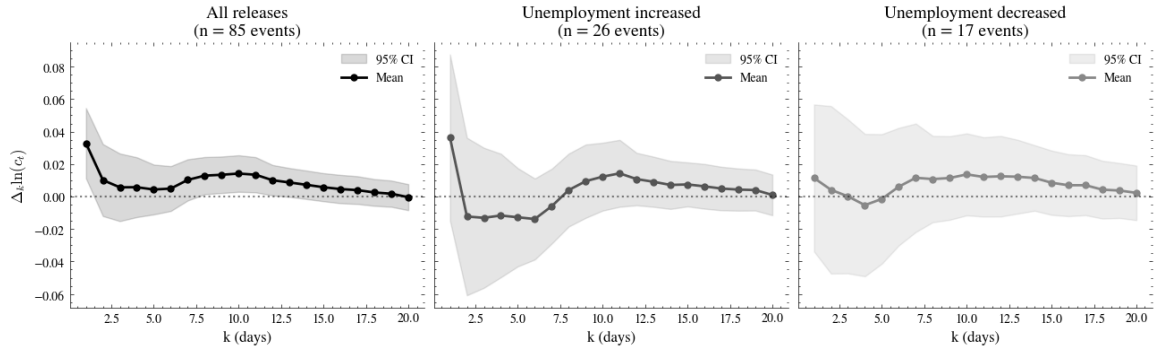
A.2 Unemployment Announcement Event Study

We next investigate whether these patterns remain consistent with varying window lengths and announcement directions. We first examine this in Figure 2 for unemployment announcements, allowing us to evaluate whether consumption response is sensitive to varying window lengths, and whether response changes depending on direction. Panel 2a varies event window length k , and Panel 2b plots consumption response within a ± 14 -day event window. Both Panels split unemployment announcements by direction.

For Panel 2a, the aggregate series (All announcements, $n = 85$) starts at approximately 0.025 at $k = 1$ and moves closer to zero at $k = 5$, staying between 0.01 and zero until $k = 20$. However, the confidence interval weakens around $k \approx 10$, suggesting that the estimated consumption response is insignificant at $k \approx 10$. Announcements indicating rising unemployment ($n = 26$) are followed by immediate negative consumption for shorter windows, reaching -0.02 at $k = 3$, and moves above zero at $k = 8$. Announcements indicating falling unemployment ($n = 17$) display a flatter pattern on average, being close to zero for all k -days.

Panel 2b shows similar descriptive patterns. The aggregate series (All releases, $n = 84$) fluctuates around a zero baseline within the ± 14 -day window, showing no clear shifts in consumption post-announcement. Unemployment announcements indicating rising unemployment ($n = 26$) show a sharp decline in consumption post-announcement, which corresponds to the short-window decline in Panel 2a. However, large confidence intervals in Panel 2b, could reflect the small sample size or noise in the data. Announcements indicating falling unemployment ($n = 16$) fluctuate mostly below zero with no visible post-announcement break.

Panel (a): k -Dependence around Unemployment Announcements



Panel (b): Consumption response around Unemployment Announcements

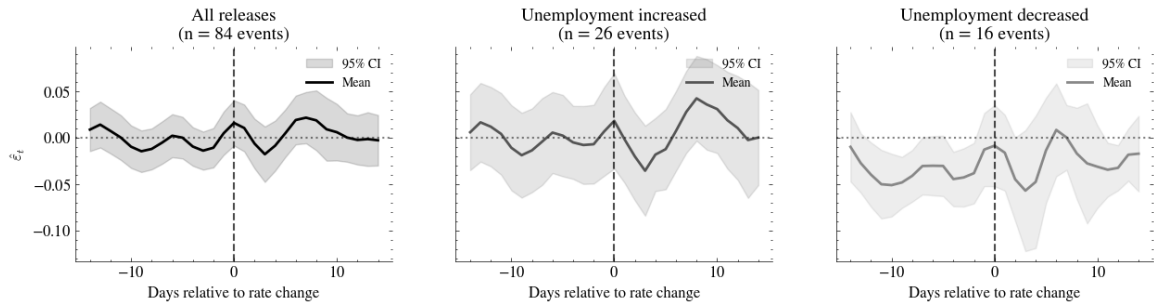


Figure 2: Consumption Responses to Unemployment Rate Announcements. Panel (a) plots the estimated consumption response ($\Delta_k \ln(c_t)$) around unemployment releases as a function of the event window length $k \in \{1, \dots, 20\}$ days. Results are shown for all releases, and partitioned into rising and falling unemployment rate. Panel (b) shows an event study of the consumption response around unemployment announcements, where $t = 0$ is the release date. To adjust for calendar effects, the underlying consumption index is the residual from an OLS regression of $\ln(c_t)$ on day-of-month, day-of-week, and month fixed effects. In Panel (b), this residual series ($\hat{\varepsilon}_t$) is additionally smoothed with a centered 3-day moving average. Shaded areas represent 95% confidence intervals, and solid lines represent sample means. The sample includes observations from 2019 through February 2026. Discrepancies in event counts (n) between panels occur since Panel (b) excludes events which lack consumption data for the full observation window.

Taken together, these plots bring some evidence for consumption response being positively associated with unemployment announcements, but we cannot fully conclude this based on Figure 2 alone. Furthermore, announcements indicating rising unemployment may be associated with reduced household consumption, while unemployment announcements indicating falling unemployment show no observable association with consumption. The initial descriptive pattern is consistent with (Garmaise et al., 2024) who find that U.S. discretionary spending falls after salient unemployment news. Nevertheless, we interpret these results cautiously.

A.3 Interest Rate Announcement Event Study

Figure 3 employs the same event-study approach to interest rate announcements from the Riksbank. We evaluate whether consumption response to interest rate announcements is sensitive to varying window lengths, and whether response changes depending on direction.

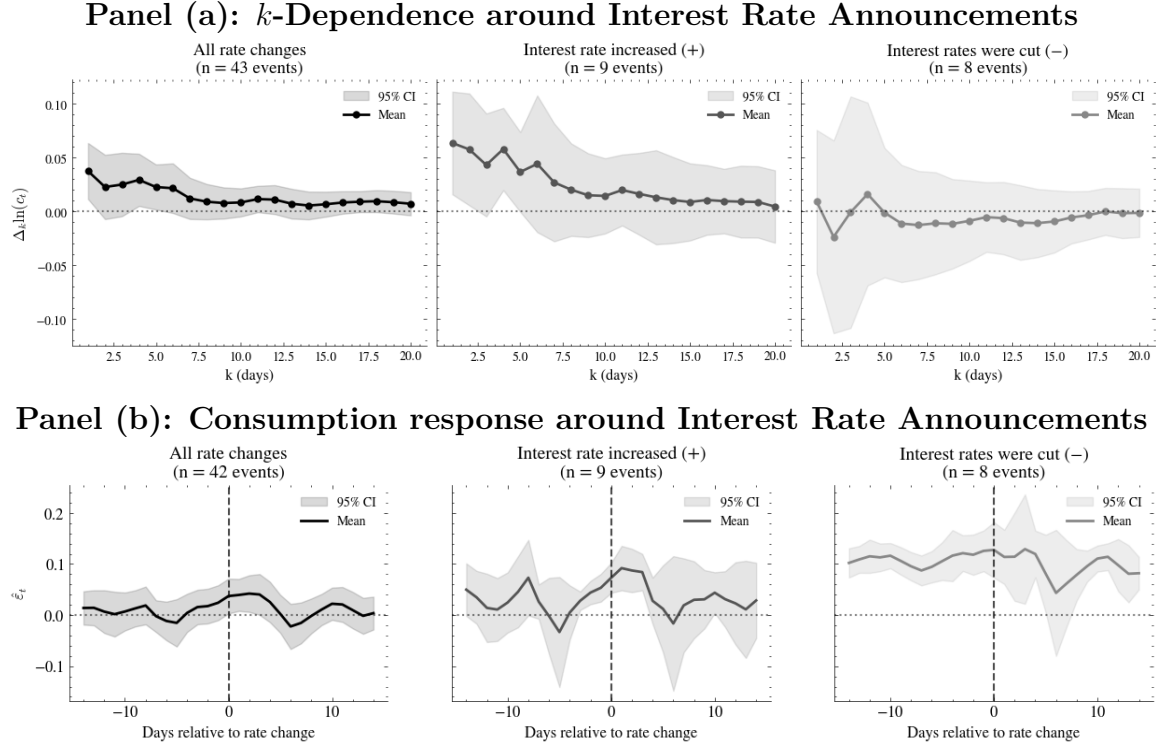


Figure 3: Consumption Responses to Interest Rate Announcements. Panel (a) plots the estimated consumption response ($\Delta_k \ln(c_t)$) around interest rate releases as a function of the event window length $k \in \{1, \dots, 20\}$ days. Results are shown for all releases, and partitioned into hikes and cuts. Panel (b) shows an event study of the consumption response around interest rate announcements, where $t = 0$ is the release date. We adjust for calendar effects by using the residual from an OLS regression of $\ln(c_t)$ on day-of-month, day-of-week, and month calendar effects as the underlying index. In Panel (b), this residual series ($\hat{\varepsilon}_t$) is additionally smoothed with a centered 3-day moving average. Shaded areas represent 95% confidence intervals, and solid lines represent sample means. The sample includes observations from 2019 through February 2026. Discrepancies in event counts (n) between panels occur since Panel (b) excludes events which lack consumption data for the full observation window.

Figure 3 shows consumption responses around interest rate announcements. Panel 3a varies event window length k , and Panel 3b plots consumption response within a ± 14 -day event window. Both Panels split unemployment announcements by direction.

Panel 3a shows that the k -day consumption response is not significant within most designated windows. However, the series remains above zero from $k = 10$ onward, which provides some support for a potential positive association between interest rate announcements and consumption response. Splitting interest rate announcements by direction, shows the sharpest short-horizon response, with consumption

response peaking at roughly 0.065 around $k = 1$, subsequently declining and stabilizing near 0.02 from approximately $k = 11$ onward. Announcements indicating falling interest rate ($n = 8$) show a flatter average pattern compared to the pattern of announcements indicating rising interest rate, but vary substantially before stabilizing at approximately -0.01 for $k = 5$ onward.

Panel 3b shows that consumption is not meaningfully associated with interest rate announcements, and the plot for announcements indicating falling interest rate show elevated consumption response throughout the ± 14 -day window. Because the consumption level elevated before the rate cut date, we cannot attribute the post-event level to the announcement. Instead, this elevated level likely reflects macroeconomic conditions leading up to the event.

The small number of directional events ($n = 8, n = 9$) generates wide confidence intervals that cross the zero baseline for most announcements dates, especially in Panel 3b. We therefore treat these results as suggestive.

B. Main Regressions

Taken together, the event-study figures in section A show substantial variation in salience and consumption around unemployment and interest rate announcements. However, these estimates do not control for macroeconomic conditions or calendar effects, which we address in our main regressions in Section B. We first examine whether Google Trends search intensity rises around unemployment and interest rate announcements (Table III) and, secondly, whether these announcements and their salience are associated with consumption response (Table IV). We then test whether consumption’s association with announcements varies by direction (Table V) and, finally, whether the consumption response to unemployment announcements is concentrated among six-month salience-based maxima (Table VI) or among six-month and twelve-month unemployment rate-based maxima (Table VII).

B.1 Google Search Intensity around Release Dates

Before we employ Google Trends as a salience proxy, we first examine whether public attention measurably spikes around scheduled macroeconomic announcements. In Table III, we regress the Google Trends search series $s_{\tau,t}$ for both topics on the dummies $Release_U$ and $Release_{IR}$ equal to one if the date is within ± 7 days of a corresponding event date.

Table III
Google Search Intensity around Macroeconomic Release Dates

This table presents OLS regression estimates testing whether Google Trends search intensity increases around release dates. Column (1) regresses the daily z -scored Google Trends series s_τ for the search word *arbetslöshet* ($Search_U$) on a release-window indicator equal to one for all dates within ± 7 -day windows of an unemployment release from SCB ($Release_U$). Column (2) displays interest rate announcements and regresses the Google Trends series for the search word *ränta* ($Search_{IR}$), on a release-window indicator equal to one for all dates within ± 7 -day windows of an interest rate release from Sweden’s Central Bank ($Release_{IR}$). We control for on day-of-month, day-of-week, and month fixed effects and use Newey-West heteroskedasticity and autocorrelation-consistent (HAC) standard errors (15 lags). The sample ranges from January 2019 to February 2026.

	$Search_U$ (1)	$Search_{IR}$ (2)
$Release_U$	0.077 (0.055)	
$Release_{IR}$		0.373*** (0.034)
Calendar Effects	Yes	Yes
Observations	2,588	2,588
R^2	0.500	0.541
Adjusted R^2	0.489	0.531
Residual Std. Error	0.707	0.694
F Statistic	32.226***	49.509***

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table III reports whether Google Trends search intensity rises within ± 7 -day windows around unemployment and interest rate announcements. Results indicate that the interest rate release window is positively and statistically significantly associated with increased search intensity ($p < 0.01$), reflecting the broad impact of Riksbank announcements. In contrast, the unemployment release indicator shows no significant relationship with salience when averaged over all announcements ($p > 0.1$). These results differ from Garmaise et al. (2024), who conduct a similar analysis for local unemployment announcements in the US and identify that Google Trends search intensity within a week of an announcement is higher compared to non-release dates. This discrepancy suggests that unemployment salience may be more state-dependent or selective in the Swedish context than in the local US context. It is possible that only the most unexpected or extreme releases, such as those marking unemployment maximums or sharp directional shifts, capture household attention. Alternatively, the response in Sweden may be more diffuse and less connected to specific announcement dates compared to the US, a hypothesis we explore by controlling for directional effects and maximum salience in the following sections.

A plausible interpretation for why the interest rate salience is significant across all releases is the unique structure of the Swedish mortgage market. Riksbank interest rate decisions directly impact the high share of the Swedish population with variable-rate mortgages, possibly incentivizing households to monitor the announcements. In contrast, monthly unemployment mainly affects households with individuals who are at risk of becoming unemployed, which may represent a smaller share of households compared to those with floating-rate mortgages. While interest rate announcements may more consistently capture to public attention, unemployment rate announcement shocks may be more persistent.

B.2 Announcement Dates, Salience, and Consumption

We continue the analysis by investigating if announcement days are associated with a different consumption response than non-announcement days, and if the salience of the announcements amplify the association.

Table IV reports regressions of consumption on release date indicators $Release_U$ and $Release_{IR}$, and on interactions between indicators and the corresponding salience measures. We estimate unemployment and interest rate channels separately to identify how consumption moves around release dates and whether consumption response is influenced by corresponding salience.

Our baseline results in column (1) confirm some of the suggestive results from figures 2 and 3, as both $Release_U$ and $Release_{IR}$ have a positive and statistically significant effect on consumption. At baseline, consumption is 1 percentage point higher for unemployment release dates ($0.010, p < 0.05$) and 1 percentage point higher on interest rate change dates ($0.010, p < 0.10$). Baseline results remain significant after controlling for calendar fixed effects, unemployment rate, interest rate changes, and inflation. Moreover, R^2 is similar for all columns at approximately 0.62, implying that interacting salience does not change the models explanatory power.

Salience interactions in columns (2) and (3) reveal a heterogeneous pattern. In column (2), $Release_U$ is positive and statistically significant at 0.009 ($p < 0.05$), S_U is also positive and statistically significant at 0.009 ($p < 0.01$), yet the interaction term $Release_U \times S_U$ contains a small coefficient of 0.003 and is insignificant. Column (3) shows that $Release_{IR}$ decreases to 0.007 and becomes insignificant, while S_{IR} remains positive and statistically significant at 0.008 ($p < 0.10$). The interaction term $Release_{IR} \times S_{IR}$ is negative at -0.005 and is insignificant.

Collectively, Table IV offers limited support for attention amplifying consumption response to unemployment and interest rate announcements. Release date coefficients show a positive association with consumption response. S_U and S_{IR} are also associated with consumption response, but interactions are insignificant and therefore do not support that attention moderates the interaction between announcements and consumption.

The lack of support does not fully rule out attention as a mechanism. Insignificant interaction terms may be due to the continuous linear interaction term averaging the consumption slope across all events, and therefore diluting responses which may only be activated by directional or maximum events. This may be particularly true for unemployment as supported by Table III.

Table IV
Effect of Release Dates and Overall Saliency on Consumption

The table displays estimates for consumption regressed on unemployment release date indicators ($Release_U$), interest rate release date indicators ($Release_{IR}$) and saliency measures. Unemployment saliency (S_U) and interest rate saliency (S_{IR}) consist of z -scored Google Trends search intensity for *arbetslöshet* and *ränta*, averaged using ± 7 -day windows around each date. Interaction terms ($Release_U \times S_U$) and ($Release_{IR} \times S_{IR}$) combine release-date indicators with matching saliency. Column (1) displays only release-date indicator results. Columns (2) and (3) interacts saliency with unemployment release date and interest rate release date indicators. Newey-West heteroskedasticity and autocorrelation-consistent (HAC) standard errors (28 lags) are reported in parenthesis. All specifications include time fixed effects and macro controls. The sample ranges from January 2019 to February 2026.

	<i>Dependent variable:</i> $\Delta_{14} \ln(c_t)$		
	Baseline	Saliency Interactions	
	(1)	(2)	(3)
$Release_U$	0.010** (0.004)	0.009** (0.004)	
$Release_{IR}$	0.010* (0.006)		0.007 (0.005)
$Release_U \times S_U$		0.003 (0.005)	
$Release_{IR} \times S_{IR}$			-0.005 (0.005)
S_U		0.009*** (0.004)	
S_{IR}			0.008* (0.004)
Time FE	Yes	Yes	Yes
Macro controls	Yes	Yes	Yes
Observations	2,560	2,560	2,560
R^2	0.619	0.628	0.621
Adjusted R^2	0.611	0.620	0.613
F Statistic	31.857***	30.952***	29.758***

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors in parentheses.

B.3 Directional Effects Study

We further test whether consumption response varies by direction of announcements in Table V by separating unemployment and interest rate announcements by sign.

Table V
Consumption Responses by Announcement Direction and Saliency Interactions

This table reports regression of consumption on directional release date indicators, saliency measures, and interaction terms. Unemployment increase (U_+) and unemployment decrease (U_-) indicate rising and falling unemployment respectively. interest rate increase (IR_+) and decrease (IR_-) indicate interest rate increases and decreases respectively. Unemployment saliency (S_U) and interest rate saliency (S_{IR}) are z -scored Google Trends search intensity for *arbetslöshet* and *ränta* respectively. Column (1) and column (2) report estimates for unemployment and interest rate respectively. All specifications control for day-of-month, day-of-week, and month fixed effects, as well as unemployment rate, interest rate changes, and monthly inflation. Wald-test p -values compare directional coefficients and saliency interactions. Newey-West standard errors (28 lags) are reported in parenthesis. The sample ranges from January 2019 to February 2026.

	<i>Dependent variable: $\Delta_{14} \ln(c_t)$</i>	
	(1)	(2)
U_+	-0.004 (0.008)	
U_-	0.014* (0.008)	
S_U	0.009*** (0.003)	
$U_+ \times S_U$	-0.003 (0.010)	
$U_- \times S_U$	0.006 (0.008)	
IR_+		-0.005 (0.019)
IR_-		-0.037 (0.036)
S_{IR}		0.008* (0.004)
$IR_+ \times S_{IR}$		0.014 (0.015)
$IR_- \times S_{IR}$		0.021 (0.028)
Time FE	Yes	Yes
Macro controls	Yes	Yes
Wald Test: Inc = Dec (p)	0.100	0.435
Wald Test: $S_{\tau,t}$ -interactions (p)	0.510	0.823
Observations	2,560	2,560
Adjusted R^2	0.620	0.613
F Statistic	29.289***	28.262***

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors in parentheses.

Table V reports regressions of consumption on directional release date indicators, salience measures, and directional salience interactions. Column (1) splits unemployment announcements into rising and falling releases and Column (2) splits interest rate announcements into rate cut and hike releases. The Wald test examines whether directional and interaction terms have different estimates for each announcement type.

Splitting announcement types by direction suggest that the positive coefficient for $Release_U$ in Table IV may be concentrated in unemployment announcements documenting a decline. Most importantly, releases for falling unemployment are associated with higher consumption within a 14-day window compared to non-release dates, whereas interest rate announcements of either direction are not associated with consumption response compared to non-release dates. S_U remains positive and statistically significant, while S_{IR} strengthens to 0.008 ($p < 0.1$).

Column (1) shows that U_- is positive and statistically significant at 0.014 ($p < 0.10$), suggesting that consumption is approximately 1.4% higher on announcement dates reporting falling unemployment compared to non-announcement dates. U_+ is close to zero at -0.004 and not significant. The Wald test comparing U_- and U_+ produces a p-value of 0.100, weakly indicating that consumption response differs between rising and falling unemployment announcements. While falling unemployment announcements are associated with a rise in consumption, we lack the power to conclude that the consumption response is asymmetric compared to announcements on rising unemployment.

In column (1), S_U is positive and statistically significant at 0.009 ($p < 0.01$), remaining unchanged from Table IV. The directional unemployment interactions, $U_+ \times S_U$ and $U_- \times S_U$, maintain small coefficients at -0.003 and 0.006 , respectively, and are not significant. The Wald Test provide no evidence of an asymmetric response for the interaction terms ($p > 0.1$).

Compared with the pooled unemployment coefficient ($Release_U$) at 0.010 ($p < 0.05$), in Table IV, directional estimates imply that average consumption response is more strongly associated with falling unemployment announcements, and more weakly associated with rising unemployment announcements.

The weakly significant asymmetry between rising and falling unemployment rate announcements contrasts with the broader asymmetric-consumption literature, which often finds stronger consumption responses to negative income shocks than to positive ones (Shea, 1995; Christelis, Georgarakos, Jappelli, Pistaferri, and van Rooij, 2019). One reason for this contrast could be that the household saving rate in Sweden is high compared to the global average, a rate that has been increasing even further since the pandemic ⁵. Thus, many Swedish households may have accumulated buffers which could make them less sensitive to immediate rises in unemployment. Conversely, falling unemployment may improve household-perceived economic outlook and reduce uncertainty, which in alignment with a buffer-stock interpretation (Carroll, 1997), possibly increases household consumption via spending excess buffers.

Moving to Column (2), IR_+ (-0.005) and IR_- (0.037) are not significant. Table IV reports a positive association between interest rate announcements and consumption with $Release_{IR}$ at 0.020 ($p < 0.006$), but Table V shows that this association

⁵See the following report published by the Swedish Riksbank: (Sveriges Riksbank, 2023)

disappears when dividing announcements by direction.

S_{IR} is positive and statistically significant at 0.008 ($p < 0.1$), in line with the interest rate salience measure in Table IV. Both directional interaction terms, $IR_+ \times S_{IR}$ and $IR_- \times S_{IR}$, have positive coefficients of 0.014 and 0.021, respectively, but neither is significant. The Wald Test reveals no asymmetric behavior between rate hikes and rate cuts, and none for their interaction terms either ($p > 0.1$). Therefore, Table V gives no evidence that salience amplifies consumption response to interest rate announcements, partitioned by direction. Rather, the S_{IR} coefficient seems to be continuously associated with consumption response. Interest rate directional insignificance aligns with Carroll (2003) whose model estimates that households update inflation expectations approximately once per year. Because interest rate changes directly affect inflation conditions, infrequent updating of inflation expectations may reduce immediate response to rate-hikes and rate-cuts. Since S_{IR} is continuous while IR_+ and IR_- are discrete, there is a higher likelihood that the continuous measurement picks up the infrequent updating under Carroll (2003)s model, explaining the significant association between S_{IR} and consumption overall. However splitting interest rate announcements by direction yield insignificant results for IR_+ and IR_- , and corresponding interaction terms, indicating that they may capture an insufficient amount of variation in the consumption response. However, these findings should be interpreted with caution due to the few rate hikes ($n = 8$) and rate cuts ($n = 9$) in our dataset.

Moreover, combining low salience events with high salience events through a continuous salience metric could also add noise to the results by mixing routine releases with unexpected shocks. It is plausible that only the most salient events where salience reach an attention threshold has a meaningful association with household consumption, an hypothesis we test in the following section.

B.4 Salience and Unemployment Rate-Based Maxima

In this section, we investigate if especially salient announcements are associated with a different consumption response compared to non-announcement days. First, we investigate announcements that reach a salience-based six-month maxima, and second, we investigate announcements that reach a six-month or twelve-month unemployment rate-based maxima.

Table VI
Effect of High-Salience Releases on Consumption

This table reports regressions of consumption on 6-month maximum salience release indicators. Unemployment salience (S_U) and interest rate salience (S_{IR}) are z -scored ± 7 -day Google Trends search intensity for keywords *arbetslöshet* and *ränta*. $U6M$ and $IR6M$ are dummies equal to 1 on release days when S_U or S_{IR} reach a 6-month maximum. $U6M_+$ and $U6M_-$ split unemployment salience maxima by announcement direction. Column (1) reports unemployment estimates, column (2) reports interest rate estimates, and column (3) reports directional unemployment estimates. All specifications control for day-of-month, day-of-week and month fixed calendar effects (Time FE), as well as unemployment rate, interest rate changes, and monthly inflation (Macro controls). Newey-West standard errors (28 lags) are reported in parenthesis. The sample ranges from January 2019 to February 2026. Directional effects for interest rate events are omitted due to insufficient events ($n = 4$ and $n = 3$).

	<i>Dependent variable: $\Delta_{14} \ln(c_t)$</i>		
	Overall (U) (1)	Overall (IR) (2)	Directional (U) (3)
$U6M$	0.009 (0.007)		
$IR6M$		0.006 (0.011)	
$U6M_+$			-0.007 (0.014)
$U6M_-$			0.027*** (0.009)
S_U	0.009*** (0.003)		0.009*** (0.003)
S_{IR}		0.008** (0.004)	
Time FE	Yes	Yes	Yes
Macro controls	Yes	Yes	Yes
Observations	2,560	2,560	2,560
R^2	0.628	0.621	0.628
Adjusted R^2	0.620	0.613	0.620
F Statistic	30.303***	29.622***	29.736***

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors in parentheses.

Table VI reports results for 6-month maximum salience indicators for aggregate and directional estimates for unemployment. Column (1) shows that $U6M$ is positive but not significant at 0.009. Unemployment salience, S_U , remains positive and

statistically significant at 0.009 ($p < 0.01$), in line with the earlier estimates. Based on column (1), the results suggest that unemployment release windows surrounding 6-month salience maxima are not significantly associated with consumption response responses beyond the level of attention already captured by the model.

Column (2) displays results for interest rate events. $IR6M$ is positive at 0.005 but is not significant. S_{IR} remains unchanged and positive at 0.008 ($p < 0.05$). Therefore interest rate release windows surrounding six-month salience maxima are not significantly associated with consumption response responses, similar to column (1).

In column (3), we identify one of our key findings by splitting announcements by direction. $U6M_-$ is positive and highly significant at 0.027 ($p < 0.01$). However, $U6M_+$ is negative but not significant at -0.007 ($p > 0.1$). We interpret these results to indicate that only highly salient reports indicating falling unemployment are significantly associated with positive consumption response. Meanwhile, highly salient announcements indicating rising unemployment are not significantly associated with consumption response response. The $U6M_-$ estimate is 0.027, which is approximately twice the size of U_- at 0.014 ($p < 0.1$) in Table V, where U_- aggregates all falling unemployment announcements for all salience levels. The linear interaction for U_- in Table V may average consumption response across regular and maximum events, weakening the estimated coefficient. The increase in magnitude for the coefficient U_- suggests that the association between consumption response and falling unemployment announcements may be concentrated among especially salient announcements.

The unemployment salience term S_U is positively associated with consumption response across our estimates at approximately 0.009 ($p < 0.01$). The estimate remains significant regardless of whether we include an interaction term, when we interact salience with release indicators, or the structure of the interaction term. Since S_U is estimated using a ± 7 -day average search intensity, the estimate aggregates correlations both before and after a given announcement, meaning we cannot interpret it causally. While reverse causality is unlikely, omitted variables such as macroeconomic shocks and media cycles not captured by controls could affect both consumption and salience simultaneously.

Importantly, the results in Table VI should be treated as suggestive rather than causal. High-salience subsets of unemployment announcements are few ($n = 9$ for $U6M_+$ and $n = 5$ for $U6M_-$) which limits statistical power, and all coefficients are descriptive associations conditional on macroeconomic controls, not causal effects, as discussed in *Subsection C*.

Table VII
Effect of Fundamentals-Based Maximum Indicators on Consumption

This table reports regressions on consumption on fundamentals-based unemployment maxima indicators, in a specification similar to Garmaise et al. (2024). U_6_HIGH and U_{12_HIGH} indicate unemployment announcements that reach a 6-month or 12-month maximum unemployment rate. $Release_U$ is a dummy equal to 1 on standard unemployment announcement days. Column (1) reports the threshold specification for U_6_HIGH and column (2) for U_{12_HIGH} . Both columns include lagged dependent variables to account for serial correlation. All specifications control for day-of-month, day-of-week and month fixed effects, as well as the current unemployment rate, interest rate changes, and monthly inflation. Newey–West HAC standard errors are reported in parentheses. The sample ranges from January 2019 to February 2026.

	<i>Dependent variable: $\Delta_{14} \ln(c_t)$</i>	
	(1)	(2)
U_6_HIGH	-0.017** (0.008)	
U_{12_HIGH}		-0.018** (0.009)
$Release_U$	0.015*** (0.005)	0.015*** (0.005)
Time FE	Yes	Yes
Macro controls	Yes	Yes
Lagged Dep. Var.	Yes	Yes
Observations	2,532	2,532
R^2	0.643	0.643
Adjusted R^2	0.635	0.635
Residual Std. Error	0.045	0.045
F Statistic	30.556***	35.758***

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Standard errors in parentheses.

Table VII reports regressions of the consumption response on unemployment rate-based maxima. Column (1) shows that announcements that reach six month maxima ($n = 25$) correspond to a 1.7% contraction in consumption ($p < 0.05$). Column (2) shows a response similar in magnitude at 1.8% ($p < 0.05$, $n = 22$).

The Google Trends based salience models in Table VI demonstrate that household consumption is significantly associated with highly salient announcements of falling unemployment rates, but not to salient rises. Conversely, the fundamentals-based threshold model adapted from Garmaise et al. (2024) demonstrates a significant negative association between unemployment announcements of 6-month and 12-month maximum rates with consumption.

This asymmetric response may be driven by positive labor-market news potentially motivating households to actively search for unemployment-rate information, captured by our Google Trends measure. However, unemployment announcements for rising unemployment may elicit a different behavioral response. A moderate rise in the unemployment rate may elevate household concern, but not enough to change

consumption or motivate active information search. Announcements indicating rising unemployment may therefore only influence household spending when the rate increase becomes large enough to reach households passively through word of mouth, news coverage, or social media. If only passive household exposure to rising unemployment announcements that reach a maximum attract enough household attention to elicit a consumption response, Google Trends search intensity may not capture this passive response effectively. Rather, our Google Trends search intensity measure may disproportionately capture active information search in response to falling unemployment announcements.

This interpretation is consistent with the Ostrich Effect, where model testing reveals that investors monitor their portfolios more actively during rising markets than during stagnant or falling markets (Karlsson et al., 2009). Households may, through the Ostrich Effect, be less likely to actively search for unemployment information following negative labor market news, and conversely more likely to do so following positive labor market news. However, this interpretation is purely suggestive, as this regression identifies associations rather than causal links.

VI. Robustness Checks

To ensure reliability of our baseline results, this section presents a series of robustness tests. This is of particular importance given the limited number of observations in certain specifications, as well as potential sensitivity of estimates as a consequence of averaging windows in the dependent variable and the salience measure.

First, we re-run our baseline specifications while excluding the COVID-19 period to verify that our baseline estimates are not exclusively driven by the structural volatility of early 2020. Second, we conduct a pre-trend placebo test using lagged variables to investigate long-term dependencies and autocorrelation, which is especially important due to the averaging windows used for our consumption and salience variables. Finally, we examine different event window lengths (k -window) for consumption to assess whether associations still hold at different time horizons.

A. Covid-19 Robustness Check

The year 2020 experienced large shifts in household consumption and unusual levels of news coverage, and therefore may disproportionately influence consumption response and Google Trends search intensity. We address this in Table VIII by running regressions excluding observations from 2020.

Table VIII
Robustness Analysis Excluding the Onset of COVID-19

This table reports regressions for the unemployment and interest rate channels when excluding the initial year of the COVID-19 pandemic in Sweden (2020). Columns (1) and (3) report the full-sample estimates for unemployment and interest rate channels, respectively. Columns (2) and (4) display estimates after excluding the year 2020. Panel A displays release-date and salience interaction specifications, Panel B displays directional specifications and Panel C displays 6-month salience interactions. For each row, the table displays estimates for release-date indicators (*Release*), Google Trends search intensity (S_τ , $\tau \in \{U, IR\}$), their interaction with salience ($Release \times S_\tau$), directional-salience interactions ($Increase \times S_\tau$ and $Decrease \times S_\tau$), and 6-month maxima indicator interactions with salience ($U6M_+$ and $U6M_-$). All specifications control for day-of-month, day-of-week and month fixed effects, as well as for the unemployment rate, interest rate changes, and monthly inflation. Newey-West standard errors (28 lags) are reported in parenthesis. The sample ranges from January 2019 to February 2026.

	Unemployment (U)		Interest Rates (IR)	
	Full Sample (1)	No COVID (2)	Full Sample (3)	No COVID (4)
<i>Panel A: Salience Interactions</i>				
<i>Release</i>	0.009** (0.004)	0.010*** (0.004)	0.007 (0.005)	0.005 (0.006)
$Release \times S_\tau$	0.003 (0.005)	0.006 (0.006)	-0.005 (0.005)	-0.002 (0.006)
S_τ	0.009*** (0.003)	0.014*** (0.005)	0.008** (0.004)	0.007* (0.004)
<i>Panel B: Directional Effects</i>				
$Increase \times S_\tau$	-0.003 (0.010)	0.025** (0.012)	0.014 (0.015)	0.017 (0.016)
$Decrease \times S_\tau$	0.006 (0.008)	0.002 (0.009)	–	–
<i>Panel C: 6m-Max Salience (U)</i>				
$U6M_+$	-0.007 (0.014)	0.011 (0.007)	–	–
$U6M_-$	0.027*** (0.009)	0.020** (0.009)	–	–
Time FE & Macro Controls	Yes	Yes	Yes	Yes
Observations	2,560	2,195	2,560	2,195

Note: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table VIII reports robustness estimates excluding 2020, the first year of the COVID-19 pandemic. In panel A, the coefficients where 2020 is excluded show similar magnitudes and significance compared to the full sample, with $Release_U$ only slightly increasing from 0.009 ($p < 0.05$) to 0.010 ($p < 0.01$), $Release \times S_U$ remains insignificant, and S_U increases from 0.009 ($p < 0.01$) to 0.014 ($p < 0.01$). Similar results are seen in the interest rate columns, with most coefficients remaining insignificant and S_{IR} decreasing from 0.008 ($p < 0.05$) to 0.007 ($p < 0.1$). Panel A suggests that $Release$ and S_τ are not exclusively explained by observations from 2020. In panel B, $Increase \times S_U$ becomes significant after excluding 2020 at 0.025 ($p < 0.05$), but $Decrease \times S_U$ remains insignificant. One plausible interpretation is that the signif-

ificance of $U_+ \times \text{Salience}$ when excluding COVID-19 comes from noise caused by the reduced number of events.

In Panel B, S_{IR} decreases from 0.008 ($p < 0.05$) to 0.007 ($p < 0.1$), suggesting some sensitivity to interest rate changes during 2020. However, the patterns remain the same for Release_{IR} , which remains positive and insignificant, and for $\text{Release} \times S_{IR}$, which remains positive and insignificant.

For Panel C, $U6M_-$ remains significant, but its coefficient decreases from 0.027 ($p < 0.1$) to 0.020 ($p < 0.05$), while $U6M_+$ remains insignificant.

Overall, excluding 2020 does not substantially change the main unemployment and interest-rate salience coefficients, but it does change one of the linear directional interaction estimates in Table VIII. $\text{Increase} \times S_U$ becomes significant after excluding 2020 which may reflect increased sensitivity due to a smaller number of windows increasing noise for the estimate.

B. Pre-trend placebo test

Our interpretation of baseline results is predicated on consumption response being linked to the actual announcement date windows rather than exogenous conditions around announcement dates. We therefore conduct a placebo test that shifts announcement and salience estimates forward by fourteen and twenty-eight days. This test helps us assess whether our results effectively capture response from announcement timing, or whether baseline estimates reflect autocorrelation, persistence, or other time-series-related confounding influences.

Table IX reports results from a placebo test in which release-date windows are shifted forward by 14 and 28 calendar days. Results from the 14-day shift show that Release_U decreases from 0.010 ($p < 0.05$) to -0.005 (not significant), and the Release_{IR} coefficient falls from 0.007 to -0.001, remaining insignificant. These patterns support that original release-date indicators in columns (1) and (4) are associated with consumption response within their windows across calendar time.

Moving to the 28-day shift, we observe a different pattern, revealing positive, significant coefficients for both unemployment and interest rate announcements. Release_U and S_U become 0.013 ($p < 0.1$) and -0.009 ($p < 0.1$), respectively. Release_{IR} and S_{IR} become 0.016 ($p < 0.1$) and -0.003 (not significant), respectively. The t+28 placebo results for Release_U bring evidence against our timing interpretation, but the result is partly explained by the calendar structure of the data. SCB's unemployment announcements are released regularly once per month, so shifting indicators forward 28 days, approximately a month, places placebo indicators near consecutive announcements. This potential overlap suggests that Release_U coefficient at t+28 may not capture the delayed response of original announcement dates, but rather the response to regular monthly announcements. This is a limitation in our placebo design because the shifted indicator placebo cannot isolate non-announcement dates.

The t+28 placebo results for Release_{IR} are more concerning, as the Riksbank interest rate announcements occur less frequently as well as irregularly. Therefore, the significant and positive coefficient for Release_{IR} at t+28 likely reflects the delayed consumption response, the confounding time-series variation, or the potential overlap with monetary-policy news, instead of the regular calendar pattern observed in unem-

Table IX
Placebo Test: Shifted Release Dates

This table reports placebo regressions of consumption response on release-date indicators and salience measures shifted forward by 14 and 28 calendar days. The Row "Release Date" reports the coefficients for the announcement indicators. The row $S_\tau, \tau \in \{U, IR\}$ reports the coefficient on the corresponding z -scored Google Trends salience measure, using *arbet-slöshet* for unemployment columns and *ränta* for interest-rate columns. Columns (1) and (4) show original specifications for unemployment and interest rate channels, respectively, where Google Trends search intensity (Salience) is measured at their actual dates. Columns (2) and (5) shift regression forward by 14 calendar days, and columns (3) and (6) shift the regression forward by 28 calendar days. Shifted variables flag dates that are not actual release windows. All specifications control for day-of-month and month fixed effects, as well as for the unemployment rate, interest rate changes, and monthly inflation. Newey–West HAC standard errors are reported in parentheses. The sample ranges from January 2019 to February 2026.

	Dependent variable: Consumption (avg log-diff, $k = 14$)					
	Unemployment (U)			Interest Rate (IR)		
	Real (1)	$t + 14$ (2)	$t + 28$ (3)	Real (4)	$t + 14$ (5)	$t + 28$ (6)
<i>Release</i> _{τ}	0.010** (0.004)	-0.005 (0.004)	0.013*** (0.004)	0.007 (0.005)	-0.001 (0.006)	0.016*** (0.006)
S_τ	0.009*** (0.003)	-0.008** (0.004)	-0.009*** (0.003)	0.008* (0.004)	-0.010** (0.004)	-0.003 (0.004)
Time FE & Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,560	2,560	2,560	2,560	2,560	2,560
R^2	0.628	0.626	0.628	0.622	0.623	0.619
F Statistic	26.84***	30.23***	34.98***	26.93***	27.84***	27.99***

Note: *p<0.1; **p<0.05; ***p<0.01. HAC standard errors in parentheses (Newey-West, 28 lags). Models include all macro controls and calendar fixed effects.

ployment announcements. Lastly, the shifted placebo indicators for unemployment and interest rate salience are negative for both changes, all significant except for S_{IR} at $t+28$. We interpret the coefficients as possibly reflecting autocorrelation or mean reversion in our Google Trends search intensity series.

C. Sensitivity to k -window choice

Our baseline analysis uses 14-day windows for its estimates to reduce daily noise in household consumption. However, these longer 14-day windows may average out short-run response to announcements. We therefore test whether our results are sensitive to window length k . Table X compares our baseline ± 14 -day window to shorter responses calculated over ± 3 - and ± 7 -day windows, allowing us to evaluate whether baseline estimates reflect persistent consumption response or short-run shifts around announcement dates.

Table X
Robustness Analysis across Consumption Window Lengths

This table reports regressions of consumption response around unemployment and interest rate announcements. Columns (1)-(3) display unemployment estimates and Columns (4)-(6) display interest rate estimates. In Panel A, $Release_\tau$, $\tau \in \{U, IR\}$ indicates unemployment announcements in columns (1)-(3) and interest rate announcements in columns (4)-(6). In Panel B, $\tau 6M$ indicates when Google Trends search intensity reaches a 6-month maximum for unemployment ($\tau = U$) and interest rate ($\tau = IR$), respectively. $S_{\tau,t}$ is the z-scored daily Google Trends search intensity for keywords *arbetslöshet* for columns (1)-(3) and *ränta* for columns (4)-(6). $Increase_\tau$ is an indicator for announcements reporting an increase in unemployment or interest rate, and $Decrease_\tau$ is an indicator for announcements reporting a decrease in unemployment or interest rate. Panel C presents decrease indicator $Decrease_\tau$ and increase indicator $Increase_\tau$ and their interactions with $S_{\tau,t}$: $Decrease_\tau \times S_{\tau,t}$ and $Increase_\tau \times S_{\tau,t}$. All specifications control for day-of-month and month fixed effects, as well as for the unemployment rate, interest rate changes, and monthly inflation. The sample ranges from January 2019 to February 2026.

	Dependent variable: $\Delta_k \ln(c_t)$					
	Unemployment ($\tau = U$)			Interest Rate ($\tau = IR$)		
	$k = 3$ (1)	$k = 7$ (2)	$k = 14$ (3)	$k = 3$ (4)	$k = 7$ (5)	$k = 14$ (6)
<i>Panel A: Baseline Release Date Effects</i>						
$Release_\tau$	0.007 (0.010)	0.011 (0.008)	0.010** (0.004)	0.028* (0.016)	0.014 (0.009)	0.010* (0.006)
<i>Panel B: 6-Month Salience Maxima</i>						
$\tau 6M$	0.030** (0.014)	0.006 (0.007)	0.009 (0.007)	0.030 (0.027)	-0.002 (0.014)	0.005 (0.011)
<i>Panel C: Directional Effects and Interaction</i>						
$Increase_\tau$	0.002 (0.021)	-0.003 (0.013)	-0.004 (0.008)	0.059 (0.042)	0.011 (0.032)	-0.005 (0.019)
$Increase_\tau \times S_\tau$	0.036 (0.024)	0.003 (0.013)	-0.003 (0.010)	-0.019 (0.029)	0.013 (0.020)	0.014 (0.015)
$Decrease_\tau$	-0.004 (0.018)	0.025* (0.014)	0.014* (0.008)	-0.271** (0.119)	-0.081 (0.058)	-0.037 (0.036)
$Decrease_\tau \times S_\tau$	0.038** (0.016)	0.020 (0.016)	0.006 (0.008)	0.221*** (0.082)	0.066 (0.043)	0.021 (0.028)
Time FE & Controls	Yes	Yes	Yes	Yes	Yes	Yes

Note: *p<0.1; **p<0.05; ***p<0.01. HAC standard errors in parentheses (Newey-West, 2k lags). IR directional results involve small sample sizes ($n = 9$, $n = 7$ events) and should be interpreted with caution.

Table X reports estimates of consumption response to unemployment and interest rate announcements for different window lengths, with $k = 3, 7$, and 14 days. Panel A displays baseline release-date estimates for both announcement types. The $Release_U$ estimate varies minimally in magnitude for all window lengths with 0.007 at $k = 3$, 0.011 at $k = 7$, and 0.010 at $k = 14$. However, standard errors decrease as the

averaging window become longer, and the coefficient becomes significant only at $k = 14$ (0.010, $p < 0.05$). The consumption response to unemployment announcements is more precisely estimated with longer windows, suggesting that longer windows reduce noise while shorter windows are more sensitive to daily noise in consumption.

Panel B reports estimates for 6-month salience maxima for unemployment releases and interest rate changes. $U6M$ is significant only at $k = 3$ (0.030, $p < 0.05$), null for longer windows, and $IR6M$ is insignificant across all window lengths. We interpret the lack of significance for $U6M$ at $k = 7$ and $k = 14$ to reflect sensitivity to noise in consumption response within the short window only at $k = 3$. Alternatively, the $U6M$ coefficient significance may not survive longer windows as increased window length averages out short-run consumption response, leaving significant association at $k=3$. The lack of significant interest rate announcement coefficients, in line with previous patterns, suggests that interest rate announcements are not significantly associated with consumption response. We treat the Panel B results cautiously, as the $U6M$ indicator is a pooled measure that includes both directions, and we therefore do not believe that it undermines our interpretation of the directional $U6M_-$ interaction in Table VI.

Panel C reports estimates of directional interactions with continuous salience. The $Decrease_U$ coefficient is negative and insignificant at $k = 3$ (-0.004), and becomes positive and statistically significant at the longer horizons (0.025, $p < 0.1$ at $k = 7$; 0.014, $p < 0.1$ at $k = 14$), suggesting that longer averaging windows reduces sensitivity to daily noise in consumption, in line with the precision pattern in Panel A. Conversely, $Decrease_U \times S_U$ (0.038, $p < 0.05$), $Decrease_{IR}$ (-0.271 , $p < 0.05$), and $Decrease_{IR} \times S_{IR}$ (0.221, $p < 0.01$) are all significant at $k = 3$ and become insignificant at longer windows. These coefficients may reflect sensitivity to noise in consumption response due to short window lengths. Alternatively, $Decrease_U \times S_U$ may reflect the same significance pattern for $U6M$ in Panel B, where longer windows average out short-run consumption response associated with announcements indicating falling unemployment that reach a six-month salience maxima, leaving significant association at $k = 3$.

Collectively, 6-month maximum salience indicators and directional interactions show sensitivity to the choice of consumption window k . Significant estimates for window length $k = 3$ could suggest short-run consumption response. Nevertheless, significant short-run associations for window length $k = 3$ may reflect sensitivity to noise in consumption response, especially for interest rate announcements which consist of observations ($n = 16$). Nevertheless, significant associations for $U6M$ and $Decrease_U \times S_\tau$ may reflect short-run response that could be investigated in future research. Overall, the robustness test brings support to using 14-day windows for our baseline regressions, where longer windows average out daily consumption noise, and shorter ones remain sensitive to consumption noise.

VII. Conclusion

This paper investigates whether Swedish household consumption changes around SCB’s unemployment and Riksbank’s interest rate announcement dates, and whether Google Trends search intensity, as a measure for salience, amplifies consumption response. Using transaction-based Swedish household consumption data from 2019 to 2026, we examine announcement date effects, directional announcement effects, Google Trends salience maxima, and unemployment rate-based maxima.

Our main finding is that announcements indicating falling unemployment that reach 6-month salience maxima are associated with 2.7% higher consumption, whereas pooled unemployment announcements that reach six and twelve month unemployment rate-based maxima⁶ are associated with -1.7% and -1.8% lower consumption respectively.

Examining research question one, our baseline regression coefficients suggest that unemployment rate and interest rate announcements are positively associated with consumption response. Moreover, splitting estimates by direction reveals asymmetric consumption associations, with the most precise estimate for falling unemployment. Meanwhile both directional interest-rate announcements and announcements indicating rising unemployment show no significant association with consumption.

For our second research question, we find evidence that continuous salience does not significantly amplify consumption surrounding announcement dates. However partitioning unemployment announcements by direction, and isolating the most salient events, reveals an asymmetry where salience amplifies consumption around announcements indicating falling unemployment, but not for announcements indicating rising unemployment. Moreover, six-month and twelve-month unemployment rate-based maxima announcements are significantly and negatively associated with consumption response.

In sum, results suggest three different possible interpretations. First, the stronger association between consumption and announcements indicating falling unemployment is consistent with Carroll (1997)’s buffer-stock savings model, where positive labor-market signals may reduce perceived income risk and incentivize precautionary savings, possibly making households more able and willing to spend. Second, the insignificant directional estimates for interest rate announcements can be interpreted within Carroll (2003)’s macroeconomic expectations framework, in which households update inflation expectations less frequently than for unemployment information. Third, the distinction between estimates for salience-based and unemployment rate-based maxima could reflect the ostrich effect. Announcements indicating falling unemployment may provoke active information search among households, which is captured by our salience measure. Meanwhile, announcements indicating rising unemployment may be ignored by households until they become extreme enough to reach households passively through news and social media, which our Google Trends measure does not capture, but our six- and twelve- month unemployment rate-based maxima do capture. This is in line with Garmaise et al. (2024) whose fundamentals-

⁶As corroborated in the local US context by Garmaise et al. (2024)

based maxima may capture consumption response that do not coincide with higher Google Search intensity.

However, we are cautious to interpret our results too broadly. Robustness checks bring some support for our central findings, where baseline coefficients and $U6M$ remain similar in magnitude and statistically significant after excluding the year 2020. Moreover, the $t + 14$ lag placebo reveals insignificant release-date coefficients, and brings support to ± 14 -day consumption windows for our baseline regressions. Significant coefficients for window length $k = 3$ raise some concerns, nevertheless we interpret them to likely be caused by increased sensitivity to noise in consumption. Additionally, we cannot rule out hidden factors that we cannot fully control, such as information shocks that occur at the same dates we examine. The significant $Release_{IR}$ coefficient at $t + 28$ highlights this concern as it cannot be explained by regular scheduling of announcements, indicating potential confounding influences.

Our findings contribute to both central banks and statistical agencies. For central banks, specifically the Riksbank, our results indicate that the salience of interest rate announcements is not significantly associated with consumption response. Rather, our findings bring support to the idea that consumption adjusts slowly and infrequently to changing interest rates, which is not captured in specific announcement dates but rather through aggregate salience. For statistical agencies like Statistics Sweden, our findings have a different implication. We find that the most salient announcements indicating falling unemployment are positively and statistically significantly associated with consumption response, which has implications for the framing of unemployment-rate announcements indicating a decrease. However, we find no significant association between Google Trends-based salience for announcements indicating rising unemployment and consumption, which may suggest that framing is not as important for these types of announcements. For empirical macroeconomic researchers studying salience effects, our results suggest that maxima-based event designs can capture consumption response, whereas continuous salience interactions may not be as effective.

There are several extensions that would improve identification. Splitting release dates by whether they are surprises or follow median forecasts would help establish whether consumption responds to news content or the announcement itself, and obtaining household-level transaction data would resolve heterogeneity issues. Alternative attention measures, such as newspaper coverage and media coverage, could validate the Google Trends proxy further. Investigating consumption response for shorter windows could provide additional information on potential short-run consumption responses and sensitivity to noise. Finally, a longer series with more announcements for both channels would increase statistical power. We invite future work to examine this further.

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A. Chain-link validation

To complement the event style analysis, we plot the raw, z -scored daily Google Trends search series $s_{U,t}$ and $s_{IR,t}$ for unemployment and interest rate over the period January 2021 to February 2026 (see Figure 4). Unlike the event-window averages $S_{\tau,t}$, the raw frequencies show the more volatile daily dynamics that the averaging is designed to be robust to.

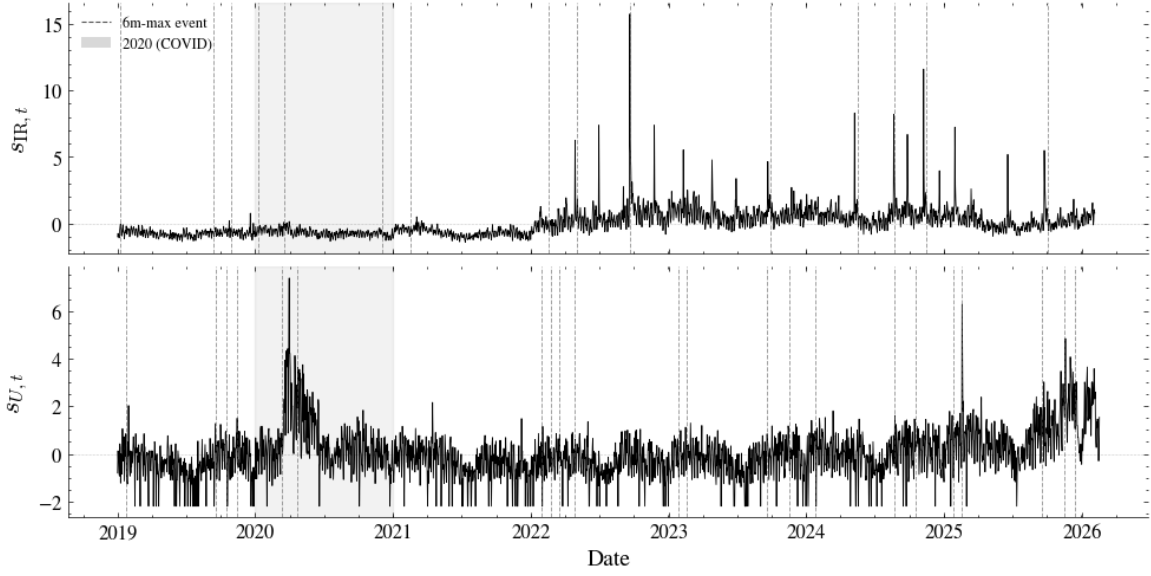


Figure 4: Raw z -Scored Daily Saliency Series. The raw, z -scored daily Google Trends search index $s_{IR,t}$ (upper panel) and $s_{U,t}$ (lower panel) over January 2019–February 2026 are plotted. Series are constructed by normalizing within a rolling 30-day chain-link window and standardizing to unit variance. Dashed vertical lines mark Riksbank announcement dates (upper panel, $N = 44$) and Statistics Sweden (SCB) unemployment release dates (lower panel, $N = 85$). Highlighted lines identify dates on which the series attains a six-month maximum.

We observe two differences between the series. Firstly, $s_{IR,t}$ exhibits sharp spikes that decay rapidly which start to appear after the rate hikes in 2022. The unemployment series $s_{U,t}$ displays a smoother and more persistent pattern, with an extended increase during COVID-19 and moderate variation thereafter. The distinct shapes reflect, in part, the different release mechanics of the two indicators. Unemployment statistics are published mid-to-late in the month and refer to the month before, which introduces a structural lag that may spread public attention over a broader window as households gradually update their beliefs. Interest rate decisions in general take effect within days of the announcement, which generates more concentrated search activity. Thus, $s_{U,t}$ seems to capture a more sustained form of macroeconomic attention, while $s_{IR,t}$ captures more distinct shocks. The effect of the averaging window used to construct $S_{\tau,t}$ becomes a smoothing of noise but also a decrease in absolute signal strength around sharp events for interest rate, while it captures a more spread-out and general attention level for unemployment.

To test the chain-linking reliability, the series were compared with control series stitched with different overlap lengths (10) and with a different starting download

date. The Pearson correlations between the main and control series were 0.992 for unemployment and 0.9996 for interest rates, indicating that the z-scoring and chain-linking algorithm yielded consistent measures.

AI Disclosure

We have made use of the AI tools Gemini, Grammarly and Claude Code to assist with table formatting in LaTeX, grammar and Python code verification. However, interpretations, conclusions and analyses presented in this work are entirely our own.