

Online Appendix

Price Setting Before and During the Pandemic: Evidence from Swiss Consumer Prices

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Abstract

Using microdata underlying the Swiss consumer price index from 2008 to 2025, we document new features of price rigidity and assess their implications for inflation dynamics. The frequency of price changes increased in the decade before the pandemic, driven by items shifting to online price collection, as confirmed by causal identification from an event-study around a collection-mode switch. During the pandemic, the aggregate frequency response was muted, masking large cross-sectional heterogeneity: demand contractions and stricter government interventions each reduced the frequency of adjustments, while demand contractions amplified their size. In response to aggregate shocks, firms adjust mainly the size rather than the frequency of price changes, consistent with time-dependent pricing. However, nonlinear local projections reveal that when price flexibility is high or price selection is strong, firms respond along both margins, monetary non-neutrality falls, and the appropriate macro model switches from time-dependent to state-dependent.

JEL classification: E31, E5, L11

Keywords: Price rigidity, price-setting behavior, consumer prices, inflation, state dependence, COVID-19 pandemic

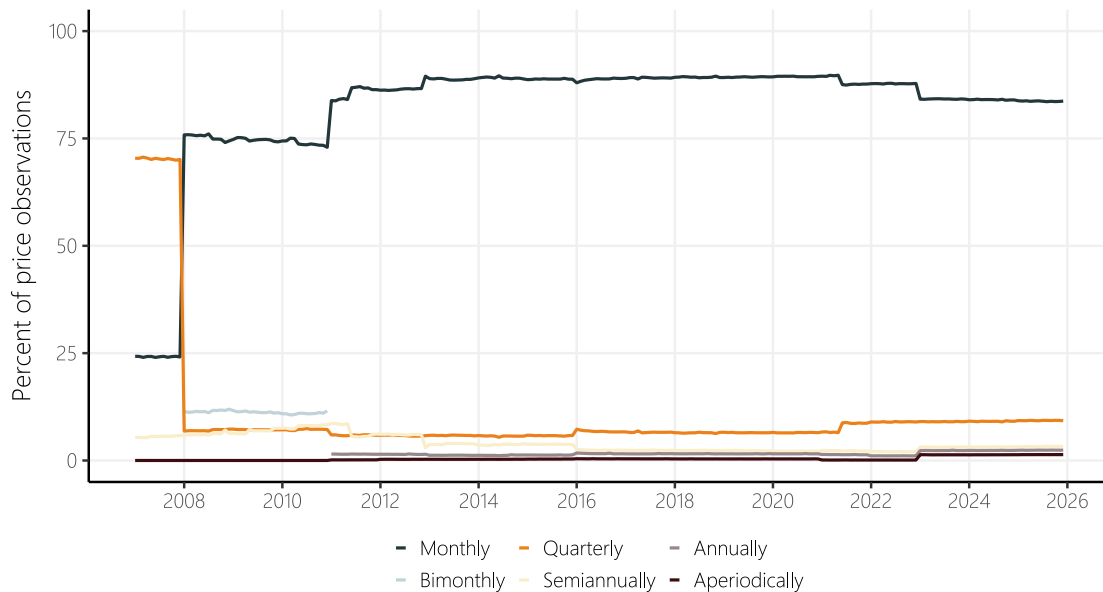
A. DATA

This appendix refers to [Section 2](#) in the main body of the paper and presents additional figures, tables, and analyses that are not featured in the main text.

A.1 Price collection

Today, the FSO collects most prices every month. The frequency of price collection changed significantly in January 2008, when the FSO started collecting most quarterly collected prices every month, as shown in [Figure A.1](#).

Figure A.1. Price collection frequency

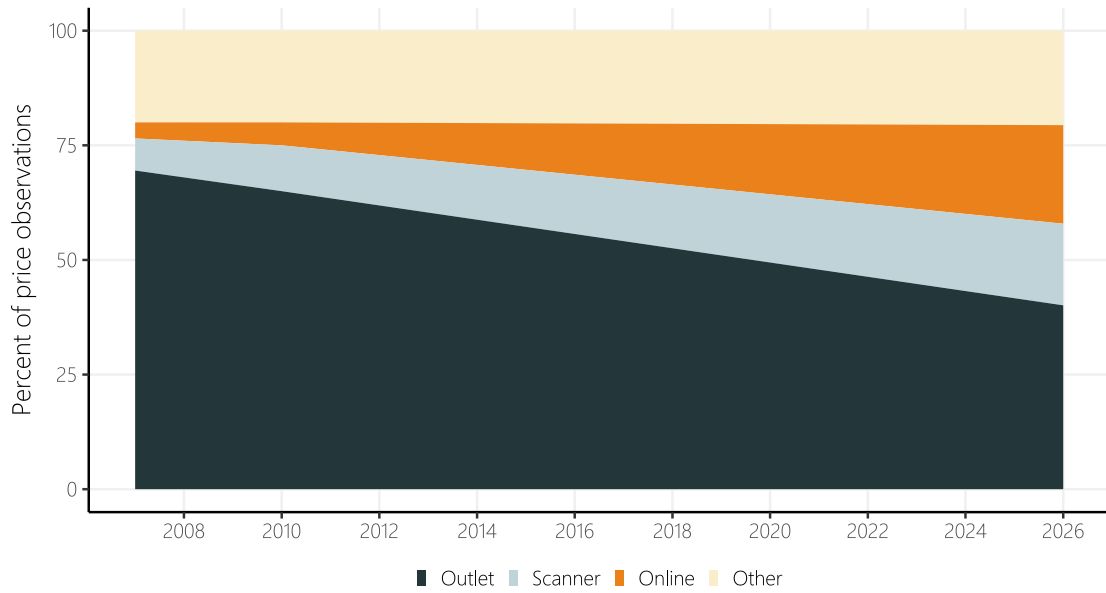


Notes: Percentage of prices collected at each price collection frequency from January 2008 to December 2025.

Traditionally, the FSO has collected most prices directly in the outlets. This practice involves price collectors visiting the stores, finding the products to be collected, and recording their prices. The share of price observations recorded directly in stores has declined substantially over time. [Figure A.2](#) shows the approximate shares of different price collection methods in the total of all price observations.

The FSO introduced scanner data in July 2008 and broadened the range of product categories for which prices are collected as scanner data in April 2010, April 2012,

Figure A.2. Price collection methods

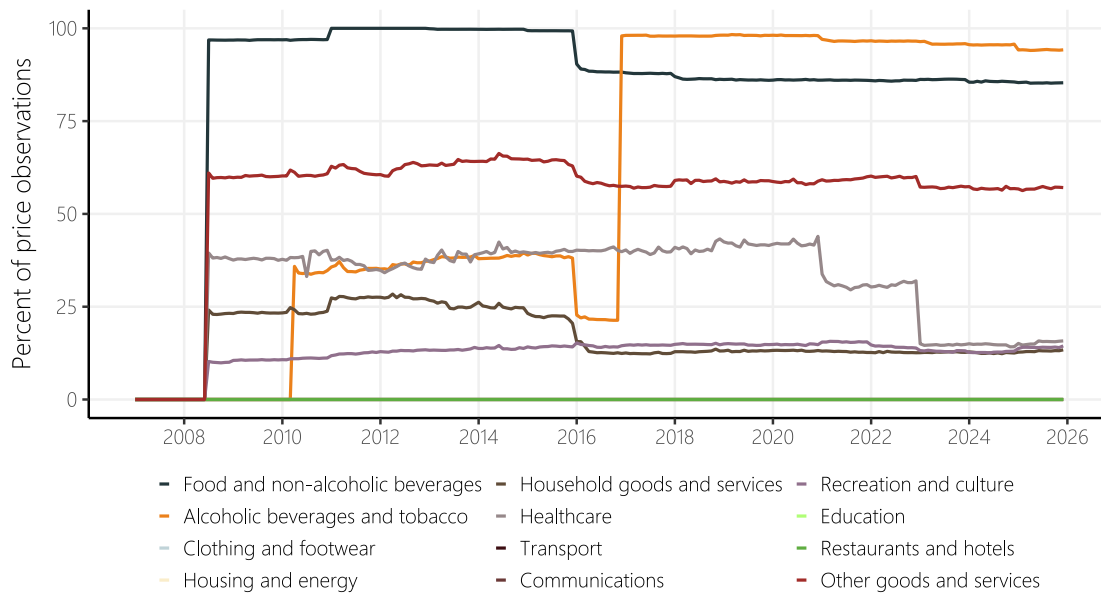


Notes: Percentage of prices collected by each price collection method from January 2008 to December 2025. “Outlet” refers to the share of price quotes collected in stores. “Scanner” refers to prices collected as part of scanner data. “Online” refers to prices collected on the internet. “Other” includes prices collected by other means, such as paper forms, e-mail, telephone, online surveys, or secondary data sources. Sources: [FSO \(2021\)](#).

and December 2016. [Figure A.3](#) shows the percentage of price quotes collected as scanner data for each main group in our sample from January 2008 to December 2025.

In the CPI microdata, online prices are not flagged at the level of individual price quotes or stores. However, some online prices can be identified at the item level. For example, from January 2016 onward, all prices for consumer electronics, package holidays, and air transport have been collected exclusively online ([FSO, 2016, 2022](#)). We classify items as “fully online” when all price quotes for that item are obtained exclusively from internet sources (i.e., price collection has completely switched to online). Similarly, we classify items as “partially online” when online price collection complements continued in-store collection (e.g., clothing, footwear, furniture, and furnishings). [Table A.1](#) provides a complete list of fully online and partially online items.

Figure A.3. Scanner collection



Notes: Percentage of price quotes collected as scanner data from January 2008 to December 2025 for each main group.

Table A.1. Expenditure items identified as online prices

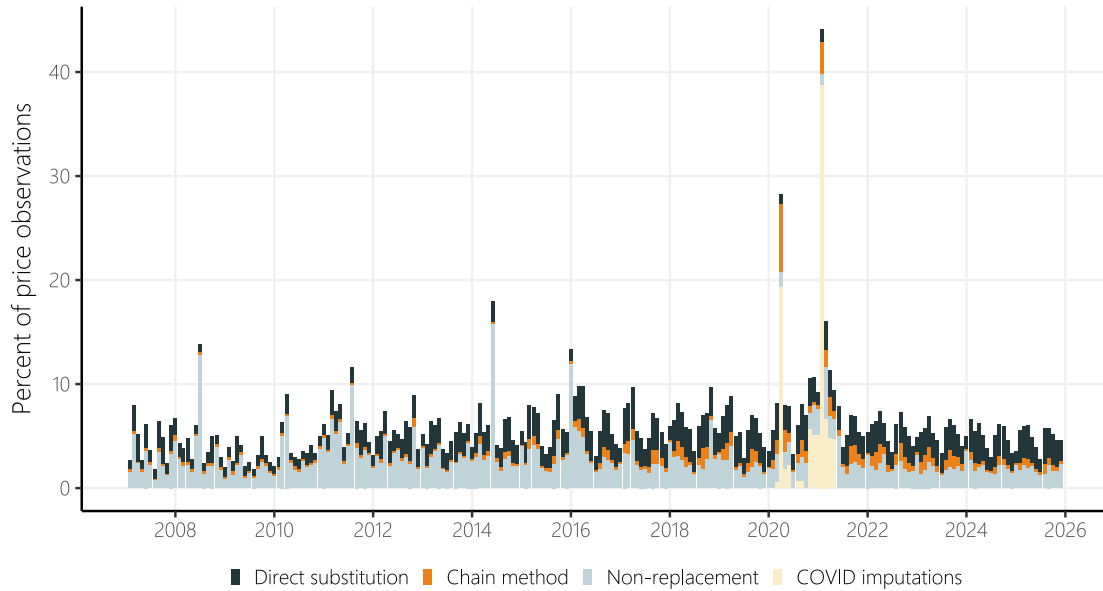
Category	Items
Fully online	Garden maintenance, other services relating to the dwelling, consumer electronics (telecommunication equipment; television sets; audiovisual appliances; photographic, cinematographic equipment and optical instruments; IT peripheral devices and accessories; computer software; storage devices and contents; games, toys and hobbies; and game consoles and electronic games) international and domestic package holidays, mountain railways, ski lifts, and social protection services (FSO, 2016, 2022)
Partially online	Items of the product groups clothing, footwear, furniture, and furnishings (FSO, 2016)

Notes: Fully online items account for 4.4% and partially online items for 5.3% of CPI weights, on average. See Section 2.2 for details.

A.2 Product substitutions and price imputations

Figure A.4 shows the percentage of substituted products in the monthly collected prices of our sample.

Figure A.4. Product substitutions and COVID price imputations



Notes: Percentage of the most common types of product substitutions from January 2008 to December 2025. “Direct substitution” is used when the old and new products share the same features or are very similar. The new product replaces the previous one, and any price difference is considered fully. The “chain method” applies to products that may have changed but whose primary function is the same. Any price difference between the old and new product is split into a difference in quality and price, but only the price difference is included in calculating the CPI. “Non-replacement” occurs if no other substitution method is applicable. The price spell of the old product is discontinued, and a new price spell is started. No price comparison is made. “COVID imputations” are price imputations during the COVID-19 pandemic.

The COVID-19 pandemic and the measures taken to contain it affected price surveys for the CPI in 2020 and 2021. The FSO could field only a partial price collection in many areas. Therefore, it had to impute many prices. [Table A.2](#) lists the expenditure items whose prices were (fully or partially) imputed each month during the COVID-19 pandemic.

Table A.2. COVID price imputations

Month	Expenditure items	CPI weight
March 2020	Air transport; International package holidays	2.70
April 2020	Jackets for men; Men's suits; Men's trousers; Men's shirts; Men's knitwear; Men's underwear; Women's coats and jackets; Women's skirts and dresses; Women's trousers; Women's blouses; Women's jumpers; Women's underwear; Children's jackets; Children's trousers and skirts; Children's knitwear; Babies' clothing; Children's underwear; Summer/year-round sportswear; Other clothing accessories; Men's footwear; Women's footwear; Children's footwear; Air transport; International package holidays; Meals taken in restaurants and cafes; Wine; Beer; Spirits, other alcoholic drinks; Coffee and tea; Mineral water and soft drinks; Self-service restaurants; Hotels	26.56
May 2020	Air transport; International package holidays; Hotels	4.05
June 2020	Air transport; International package holidays; Hotels	4.05
July 2020	Air transport	0.72
August 2020	Air transport; Sporting events; Admission to sport facilities	0.76
September 2020	Air transport; Sporting events; Admission to sport facilities	0.76
October 2020	Air transport	0.72
November 2020	Air transport; International package holidays; Meals taken in restaurants and cafes; Wine; Beer; Spirits, other alcoholic drinks; Coffee and tea; Mineral water and soft drinks; Self-service restaurants; Fast food meals; Men's and children's hairdressers; Women's hairdressers	18.94
December 2020	Air transport; International package holidays; Meals taken in restaurants and cafes; Wine; Beer; Spirits, other alcoholic drinks; Coffee and tea; Mineral water and soft drinks; Self-service restaurants; Fast food meals	18.38
January 2021	Air transport; International package holidays; Meals taken in restaurants and cafes; Wine; Beer; Spirits, other alcoholic drinks; Coffee and tea; Mineral water and soft drinks; Self-service restaurants; Fast food meals	12.74
February 2021	Air transport; International package holidays; Meals taken in restaurants and cafes; Wine; Beer; Spirits, other alcoholic drinks; Coffee and tea; Mineral water and soft drinks; Self-service restaurants; Fast food meals	12.74
March 2021	Air transport; Sporting events; Cinema; Theatre and concerts; International package holidays; Meals taken in restaurants and cafes; Fast food meals; Wine; Beer; Spirits, other alcoholic drinks; Coffee and tea; Mineral water and soft drinks; Self-service restaurants	13.26
April 2021	Air transport; International package holidays; Meals taken in restaurants and cafes; Fast food meals; Wine; Beer; Spirits, other alcoholic drinks; Coffee and tea; Mineral water and soft drinks; Self-service restaurants	12.89
May 2021	Air transport; International package holidays; Meals taken in restaurants and cafes; Fast food meals; Wine; Beer; Spirits, other alcoholic drinks; Coffee and tea; Mineral water and soft drinks; Self-service restaurants	12.89

Notes: Expenditure items whose prices were (fully or partially) imputed in 2020 and 2021 during the COVID-19 pandemic. Source: Monthly press releases on the Swiss CPI by the FSO.

A.3 Data treatment and sampling decisions

Our data sample excludes items whose prices are tracked using auxiliary indices rather than individual price quotes, as well as items with administered or semi-administered prices set by government authorities. [Table A.3](#) lists the excluded index-based items and (semi-)administered price items.

Table A.3. Expenditure items excluded from the analysis

Category	Items
Index-based items	Housing rentals; rental of garages, parking spaces; imputed rent for owner-occupied dwellings; medicines; medical services at local surgery; in-patient hospital services; hire of private means of transport; second-hand cars; public transport: direct service; public transport: combined services; air transport; postal services; personal computers; recorded media; recreational boats; games of chance; fiction books; school and educational books; other books; private health insurance
(Semi-)administered prices	Charges for household waste elimination; charges for water provision; charges for sewerage; maintenance and care-taking; gas; electricity; district heating; medicines; medical services at local surgery; dental services; physiotherapy, home care (Spitex); laboratory analyses; in-patient hospital services; out-patient medical services in hospitals; parking fees; taxes for private vehicles and driving school; public transport: direct service; public transport: combined services; taxi; postal services; admission to sport facilities; fees for radio and TV reception; compulsory education; post-compulsory education; higher vocational education and universities; social protection services; household insurance; private health insurance; car insurance

Notes: Index-based items are tracked by auxiliary indices rather than observed price quotes and account for 36.3% of CPI expenditure weights in 2025. Administered and semi-administered prices are set by government authorities and/or centrally collected and account for 25.6% of CPI weights. See [Section 2.6](#) for details.

B. AGGREGATE AND CROSS-SECTIONAL PRICE-SETTING MOMENTS

This appendix refers to [Section 3.1](#) and [Section 3.2](#) in the main body of the paper and presents additional figures, tables, and analyses that are not featured in the main text.

B.1 Computation and aggregation of price-setting moments

Price quotes and product definition We observe individual transaction prices, $P_{p,s,t}$, where p indexes a barcode-level product, s an outlet, and t time. Products p are mapped into the COICOP classification, with the most disaggregated level being the variety v , defined as a 10-digit COICOP category. Each product p belongs to a unique variety v (i.e., $p \in v$).

Price changes The (log) price change associated with product p in outlet s between months $t - 1$ and t is defined as

$$\Delta p_{p,s,t} = \ln P_{p,s,t} - \ln P_{p,s,t-1}. \quad (6)$$

We define an indicator for a non-zero price change,

$$I_{p,s,t} = \mathbb{1}[\Delta p_{p,s,t} \neq 0], \quad (7)$$

and analogously indicators for price increases and decreases,

$$I_{p,s,t}^+ = \mathbb{1}[\Delta p_{p,s,t} > 0], \quad I_{p,s,t}^- = \mathbb{1}[\Delta p_{p,s,t} < 0]. \quad (8)$$

Frequency of price changes The frequency of price changes for variety v in month t is defined as the weighted share of price quotes that change relative to the previous month:

$$f_{v,t} = \frac{\sum_{p \in v} \sum_s \omega_{p,s,t} I_{p,s,t}}{\sum_{p \in v} \sum_s \omega_{p,s,t}}. \quad (9)$$

The weight $\omega_{p,s,t}$ is constructed as the CPI expenditure share of variety v divided

by the number of price quotes collected for that variety in month t . By construction, frequencies aggregate to the CPI weighting scheme within each variety. In practice, CPI weights are updated annually and kept constant within the year.

The frequencies of price increases $f_{v,t}^+$ and decreases $f_{v,t}^-$ are computed analogously by replacing $I_{p,s,t}$ with $I_{p,s,t}^+$ and $I_{p,s,t}^-$, respectively.

Size of price changes The average size of price changes for variety v in month t is defined as the mean of non-zero log price changes:

$$\Delta p_{v,t} = \frac{\sum_{p \in v} \sum_s \omega_{p,s,t} \Delta p_{p,s,t} I_{p,s,t}}{\sum_{p \in v} \sum_s \omega_{p,s,t} I_{p,s,t}}. \quad (10)$$

We also compute the average absolute size of price changes,

$$|\Delta p_{v,t}| = \frac{\sum_{p \in v} \sum_s \omega_{p,s,t} |\Delta p_{p,s,t}| I_{p,s,t}}{\sum_{p \in v} \sum_s \omega_{p,s,t} I_{p,s,t}}, \quad (11)$$

as well as the average size of price increases $\Delta p_{v,t}^+$ and decreases $\Delta p_{v,t}^-$ by conditioning on $I_{p,s,t}^+$ and $I_{p,s,t}^-$, respectively.

Higher-order moments To characterize the distribution of price adjustments beyond first moments, we compute the kurtosis of standardized price changes. Standardization is performed at the finest available cell level, defined as a variety v . For each variety, we compute the mean and standard deviation of non-zero price changes over the sample and define standardized price changes as

$$z_{p,s,t} = \frac{\Delta p_{p,s,t} - \mu_v}{\sigma_v}, \quad (12)$$

where μ_v and σ_v denote the mean and standard deviation of non-zero price changes for variety v . Monthly kurtosis is then computed using the cross-section of standardized price changes observed in month t . This standardization ensures that higher-order moments are not driven by cross-variety heterogeneity in average price change sizes.

Sales-related price-setting moments The dataset contains a sales indicator provided by the FSO which we use to identify sales prices (see [Section 2.3](#)). We define

the frequency of sales price changes as the share of price quotes flagged as sales whose price differs from the previous month. The size of sales is measured as the average absolute log difference between the sales price and the corresponding regular (non-sale) price. All sales-related moments are computed using the same weighting scheme $\omega_{p,s,t}$ as for regular prices.

Treatment of sales and regular prices In the baseline analysis, all statistics are computed using observed transaction prices, including temporary sales. When excluding temporary sales, we use the FSO sales flag to define a regular price recursively as

$$P_{p,s,t}^{\text{reg}} = \begin{cases} P_{p,s,t}, & \text{if } P_{p,s,t} \text{ not on sale,} \\ P_{p,s,t-1}^{\text{reg}}, & \text{if } P_{p,s,t} \text{ on sale,} \end{cases} \quad (13)$$

and recompute all frequency and size moments by replacing $P_{p,s,t}$ with $P_{p,s,t}^{\text{reg}}$, thus eliminating price changes due to temporary sales. Additional robustness checks based on alternative sales filters—the symmetric V-shaped filter of [Nakamura and Steinsson \(2008\)](#) and the running mode filter of [Kehoe and Midrigan \(2015\)](#)—are discussed in [Online Appendix B.3](#).

Aggregation Aggregate price-setting moments are constructed as CPI-weighted means or medians of variety-level statistics. Let $x_{v,t}$ denote a price-setting moment computed at the variety level v in month t (e.g., the frequency of price changes), and let w_v denote the CPI expenditure weight of variety v . In the case of a weighted mean, the aggregate moment x_t is defined as

$$x_t = \sum_v w_v x_{v,t}. \quad (14)$$

Weighted medians are computed similarly by ordering varieties according to $x_{v,t}$ and using CPI expenditure weights to determine the median.

Aggregate moments are not only reported for the full CPI basket but also for a range of subaggregates. Sectoral subaggregates are constructed by grouping varieties into mutually exclusive sectors based on their COICOP classification. In particular, we follow the COICOP-HICP special aggregates defined by Eurostat. The food sector includes alcohol and tobacco; industrial goods exclude energy

goods; and services correspond to the overall index excluding goods (i.e., food, industrial goods, and energy). Services related to recreation also include repair and personal care services.

In addition, we report statistics for the twelve main COICOP divisions at the two-digit level. More granular subaggregates, reported in [Table B.13](#) in [Online Appendix B.6](#), are constructed at the five-digit COICOP subclass (expenditure item) level.

We further distinguish between online and offline price quotes and report moments separately for prices collected fully online, partially online, and exclusively offline. We identify online prices as described in [Section 2.2](#). [Table A.1](#) in [Online Appendix A.1](#) provides a complete list of fully online and partially online items.

Regional subaggregates are constructed at the NUTS-2 level. Switzerland is divided into seven NUTS-2 regions, following the Nomenclature of Territorial Units for Statistics (NUTS), a standardized geocode system used for statistical purposes in Europe. Aggregate moments at the regional level are computed using CPI-weighted averages of variety-level statistics within each region.

B.2 The distribution of price changes

[Table B.1](#) summarizes various statistics on the distribution of non-zero price changes including temporary sales and product substitutions. [Table B.2](#) provides the corresponding set of results for the sample excluding sales.

Table B.1. Distribution of the size of price adjustments

	Size of price adjustments				
	Average Changes	Absolute Changes	Increases	Decreases	Standardized Changes
	Δp	$ \Delta p $	Δp^+	Δp^-	z
Mean	0.1	7.4	6.8	-8.1	0.7
10th percentile	-10.5	0.4	0.5	-35.7	0.1
25th percentile	-2.6	1.1	2.0	-20.8	0.2
50th percentile	0.2	2.8	6.9	-8.3	0.5
75th percentile	3.0	7.7	17.6	-2.1	1.0
90th percentile	10.2	21.1	35.5	-0.4	1.6
Standard deviation	20.3	16.0	16.2	15.8	0.7
Skewness	0.2				0.0
Kurtosis	8.8				5.2

Notes: The sample ranges from January 2008 to December 2025 and includes price changes due to temporary sales and product substitutions. The sizes of average price “changes,” “absolute” price changes, price “increases,” “decreases,” and “standardized” price changes refer to the weighted averages of the average size of price changes, the absolute size of price changes, size of price increases, size of price decreases, and size of standardized price changes, respectively. The mean size of average price changes is calculated by first computing the average size of price changes for each variety and then taking a weighted mean across all varieties using CPI expenditure weights. Statistics of other moments are calculated analogously. Values are reported in percent per month.

Table B.2. Distribution of the size of price adjustments based on the sample excluding temporary sales

	Size of price adjustments				
	Average	Absolute	Increases	Decreases	Standardized
	Changes	Changes			Changes
	Δp	$ \Delta p $	Δp^+	Δp^-	z
Mean	0.2	5.9	5.4	-6.4	0.7
10th percentile	-8.0	0.3	0.4	-23.6	0.1
25th percentile	-2.3	1.1	1.4	-13.5	0.2
50th percentile	0.2	2.6	4.9	-5.8	0.5
75th percentile	2.8	6.4	11.8	-1.5	1.0
90th percentile	8.3	15.4	21.9	-0.4	1.6
Standard deviation	14.4	11.4	11.4	11.5	0.7
Skewness	0.2				-0.0
Kurtosis	13.6				5.6

Notes: The sample ranges from January 2008 to December 2025 and includes price changes due to product substitutions but excludes price changes due to temporary sales. The sizes of average price “changes,” “absolute” price changes, price “increases,” “decreases,” and “standardized” price changes refer to the weighted averages of the average size of price changes, the absolute size of price changes, size of price increases, size of price decreases, and size of standardized price changes, respectively. The mean size of average price changes is calculated by first computing the average size of price changes for each variety and then taking a weighted mean across all varieties using CPI expenditure weights. Statistics of other moments are calculated analogously. Values are reported in percent per month.

B.3 Alternative sale filters

In the main text, we rely on the sales flags provided by the FSO to identify temporary sales. In this appendix, we assess the robustness of our sales-filtered results by employing two alternative sale filters to identify and remove temporary sales from our data. For one, we employ a symmetric V-shaped sale filter proposed by Nakamura and Steinsson (2008), which aims at removing price patterns in which the price returns to the same price within 1 or 3 months. If the price does not return to the original price within the chosen window, we consider the price change a regular price change. In addition, we create monthly reference prices as 3-month running modal prices, which we iteratively update to align the

reference-price change with the actual price change as in [Kehoe and Midrigan \(2015\)](#).

[Table B.3](#) and [Table B.4](#) present the frequency and size of price adjustments, respectively, for the two versions of the symmetric V-shaped sale filter and the running mode filter.

Table B.3. Frequency of price adjustments, alternative sale filters

	Frequency of price adjustments			Share Increases
	Changes	Increases	Decreases	
	f	f^+	f^-	
<i>V-shaped filter (1-month window)</i>				
Mean	24.7	13.2	11.5	56.4
Median	13.3	5.6	4.2	
Std. dev.	28.6	19.6	18.6	
<i>V-shaped filter (3-month window)</i>				
Mean	20.1	11.2	8.9	58.4
Median	9.2	4.3	2.7	
Std. dev.	25.8	18.0	16.0	
<i>Running mode filter (3-month window)</i>				
Mean	18.9	10.1	8.8	55.9
Median	5.9	2.4	1.3	
Std. dev.	27.5	18.3	17.0	

Notes: The sample ranges from January 2008 to December 2025 and includes price changes due to product substitutions. The V-shaped filter removes symmetric V-shaped price changes, following the algorithm of [Nakamura and Steinsson \(2008\)](#). We consider 1-month and 3-month windows. The running mode filter removes price changes following the algorithm of [Kehoe and Midrigan \(2015\)](#). The frequencies of price “changes,” “increases,” and “decreases” refer to the weighted averages of the shares of price changes, increases, and decreases, respectively. The mean frequency of price changes is calculated by first computing the frequency of price changes for each variety and then taking a weighted mean across all varieties using CPI expenditure weights. Median statistics and statistics of standard deviations are calculated analogously. “Share of increases” refers to the share of price increases in all price changes. Values are reported in percent per month.

Table B.4. Size of price adjustments, alternative sale filters

	Size of price adjustments			
	Average	Absolute	Increases	Decreases
	Changes	Changes		
	Δp	$ \Delta p $	Δp^+	Δp^-
<i>V-shaped filter (1-month window)</i>				
Mean	0.3	10.5	9.8	-11.0
Median	0.6	7.3	6.5	-7.6
Std. dev.	11.1	10.4	10.5	11.1
<i>V-shaped filter (3-month window)</i>				
Mean	0.3	10.3	9.5	-10.9
Median	0.7	7.2	6.3	-7.6
Std. dev.	11.0	10.1	10.2	11.0
<i>Running mode filter (3-month window)</i>				
Mean	0.4	8.0	7.6	-8.2
Median	0.5	5.5	5.1	-5.5
Std. dev.	8.3	8.0	8.2	8.4

Notes: The sample ranges from January 2008 to December 2025 and includes price changes due to product substitutions. The V-shaped filter removes symmetric V-shaped price changes, following the algorithm of [Nakamura and Steinsson \(2008\)](#). We consider 1-month and 3-month windows. The running mode filter removes price changes following the algorithm of [Kehoe and Midrigan \(2015\)](#). The sizes of “absolute” price changes, price “increases,” and “decreases” refer to the weighted averages of the absolute size of price changes, size of price increases, and absolute size of price decreases, respectively. The mean size of average price changes is calculated by first computing the average size of price changes for each variety and then taking a weighted mean across all varieties using CPI expenditure weights. Median statistics and statistics of standard deviations are calculated analogously. Values are reported in percent per month.

B.4 Comparison with evidence on price setting in the United States

This section provides more details on the methodology and the results of comparing of our findings on price rigidity in Switzerland with evidence for the United States provided by [Nakamura and Steinsson \(2008\)](#) for the period 1998–2005.

To secure a consistent comparison and control for possible differences in the composition of the consumption baskets, we perform the comparison based on a restricted sample of products represented in both countries. Furthermore, we

use US CPI expenditure weights to calculate the aggregate statistics for both economies. We start from the disaggregated results on the frequency and size of price changes that are part of the supplementary material by [Nakamura and Steinsson \(2010\)](#). These results are available from 1998 to 2005 based on samples including and excluding temporary sales (product substitutions are excluded in both samples). To determine the sample of comparable products, we create a correspondence table between the Entry Level Items (ELIs) classification of the US CPI and the COICOP classification of the Swiss CPI (we map ELIs into COICOP at the five-digit level).

We exclude 16 ELIs (accounting for 3.1 percent of the US consumption basket), for which we do not find an appropriate correspondence in the five-digit COICOP categories. These ELIs are dogs (RB012), automobile service clubs (TF032), housing at school, excluding board (HB011), replacement of setting for women's rings (GD043), calculators and adding machines (EE042), gardening or lawn care services (HP021), reupholstery of furniture (HP042), Spanish/Mexican foods (FT062), rental of video tapes and discs (RA042), peanut butter (FS031), moving, storage, freight express (HP031), appliance repair (HP041), motor oil (TC022), alternative automotive fuels (TB022), vehicle leasing (TA031) and automobile rental (TA041). Furthermore, we exclude 5 five-digit COICOP categories (accounting for 8.2 percent of the US consumption basket) for which underlying prices are collected using a different method in one country (e.g., as a unit value index or administered prices) than in the other. These COICOP categories are electricity (04.5.1), gas (04.5.2), other health-related incurred costs (06.6.1), recording media (09.1.4), and books (09.5.1).

[Table B.5](#) and the upper panels of [Figure B.1](#) present the comparison results for the frequency of price changes. Results are given for the mean and median frequencies of price changes and samples including and excluding temporary sales. Price changes due to product substitutions are excluded in all samples. The corresponding results for the absolute size of price changes are presented in [Table B.6](#) and in the lower panels of [Figure B.1](#).

Table B.5. Frequency of price adjustments: Switzerland versus United States

	Including sales				Excluding sales			
	Mean		Median		Mean		Median	
	CH	US	CH	US	CH	US	CH	US
Total	23.1	25.8	15.1	20.4	21.5	20.2	9.6	8.4
Food	29.7	31.3	28.1	32.9	28.4	17.7	26.9	13.1
NEIG	22.0	28.6	15.9	25.9	17.5	17.7	6.1	6.4
Energy	84.2	85.4	84.5	87.6	84.0	85.4	84.3	87.6
Services	14.1	15.2	6.1	7.8	14.0	14.9	5.9	7.8

Notes: Mean and median frequencies of price adjustments in percent per month for Switzerland and the United States. The results for Switzerland are based on the period from January 2008 to December 2025. The results for the US are taken from [Nakamura and Steinsson \(2010\)](#) and calculated for the period 1998–2005. To control for possible differences in the composition of the consumption basket across economic areas, the comparison uses the same equivalent products and US CPI expenditure weights to calculate the aggregate statistics. Both samples exclude price changes due to product substitutions. Temporary sales are excluded using sales flags by the respective national statistical offices.

Table B.6. Absolute size of price adjustments: Switzerland versus United States

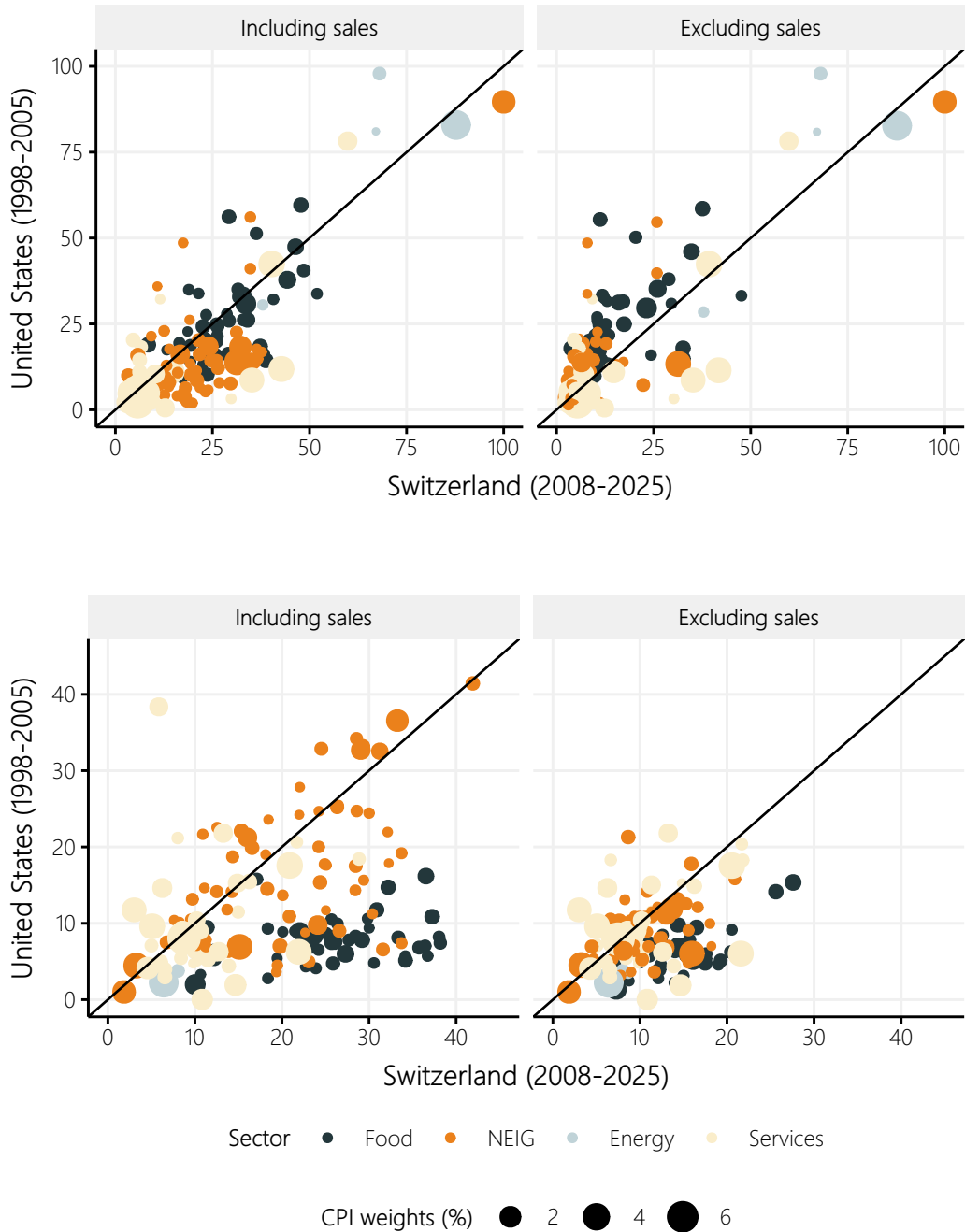
	Including sales						Excluding sales					
	Changes		Increases		Decreases		Changes		Increases		Decreases	
	CH	US	CH	US	CH	US	CH	US	CH	US	CH	US
Total	10.4	15.3	9.7	14.2	10.7	17.3	8.0	10.7	7.5	10.1	8.5	12.5
Food	7.5	24.8	7.3	23.4	7.6	26.6	6.3	13.7	6.1	12.6	6.2	16.0
NEIG	14.9	18.4	13.4	16.6	15.1	19.7	7.5	9.7	7.0	9.3	8.0	10.7
Energy	2.3	6.6	2.0	7.0	2.1	6.0	2.3	6.6	1.9	7.0	2.0	6.0
Services	9.7	11.1	9.4	10.4	10.2	13.7	9.7	10.6	9.1	10.0	10.4	13.0

Notes: Average absolute size of price changes, increases, and absolute decreases in percent per month for Switzerland and the United States. The results for Switzerland are based on the period from January 2008 to December 2025. The results for the US are taken from [Nakamura and Steinsson \(2010\)](#) and calculated for the period 1998–2005. To control for possible differences in the composition of the consumption basket across economic areas, the comparison uses the same equivalent products and US CPI expenditure weights to calculate the aggregate statistics. Both samples exclude price changes due to product substitutions. Temporary sales are excluded using sales flags by the respective national statistical offices.

For the sample including sales, we find that prices are on average more flexible in the United States than in Switzerland. The average frequency of price adjustments is 25.8 percent in the US, whereas it is 23.1 percent for comparable goods and services in Switzerland (see [Table B.5](#)). However, when we exclude temporary sales, the frequencies of price changes are approximately the same in both countries: 20.2 percent in the US and 21.5 percent in Switzerland. The same pattern applies to the median frequencies of price changes. Examining the sectoral differences, we observe that the median frequency of food price changes is significantly higher in Switzerland than in the US (+14 percentage points excluding temporary sales). This difference could partly be because in Switzerland, the prices of most food items have been collected as scanner data since 2008, which leads to more frequent price changes ([Cavallo, 2018b](#)). In all other sectors, the median price adjustment frequency in the US exceeds that in Switzerland by 2 to 3 percentage points.

Turning to the size of price changes, we find that price changes in the US are, on average, significantly larger than in Switzerland. For the sample including

Figure B.1. Frequency and size of price changes: Switzerland versus the United States



Notes: Frequency (upper panels) and size of price changes (lower panels) for the samples including and excluding temporary sales for Switzerland and the United States. The results for Switzerland are based on the period from January 2008 to December 2025. The results for the US are taken from [Nakamura and Steinsson \(2010\)](#) and calculated for the period 1998–2005. To control for possible differences in the composition of the consumption basket across economic areas, the comparison uses the same equivalent products and US CPI expenditure weights to calculate the aggregate statistics. Both samples exclude price changes due to product substitutions. Temporary sales are excluded using sales flags by the respective national statistical offices. All moments are depicted in percent.

temporary sales, the average absolute price change is 15.3 percent in the US and 10.4 percent in Switzerland (see [Table B.6](#)). When we exclude price changes due to temporary sales, we find that the size of price changes in both countries is slightly closer: 10.7 percent in the United States versus 8.0 percent in Switzerland. Price changes in the food and energy sector are more than twice as large in the US than in Switzerland. For food items, this could again be related to the use of scanner data, which are usually associated with smaller price changes ([Cavallo, 2018b](#)). For NEIG and services, the size of price changes in the US exceeds that in Switzerland by approximately 2 percentage points.

B.5 Comparison with evidence on price setting in the euro area

This section provides more details on the methodology and the results of comparing our findings on price rigidity in Switzerland with evidence for the euro area provided by [Gautier et al. \(2024\)](#).

[Gautier et al. \(2024\)](#) use CPI microdata from eleven euro area countries and build a harmonized sample of 166 common products at the five-digit COICOP level. The 166 common products are items for which data are available in at least three of the four largest euro area countries (Germany, France, Italy, and Spain). They calculate results on the frequency and size of price changes over the common period from 2011 to 2017 across all countries, except for Belgium (2011–2015) and Latvia (2017).

[Gautier et al. \(2024\)](#) do not publish disaggregated results on the frequency and size of price changes. Therefore, we restrict our sample to 155 of the 166 common products, which are also represented in our Swiss data.⁴⁰ The 11 five-digit COICOP categories missing from the Swiss data account for only 1.8 percent of the 166 common products in the euro area by expenditure weight, which leaves our comparison broadly representative. The sample of products represented in both economic areas covers 53.1 percent of the 2025 Swiss CPI basket. We further restrict the sample period to 2011–2017 to compare moments of price rigidity on a common period in all euro area countries (except Belgium: 2011–2015; Latvia: 2017) and Switzerland. Furthermore, we use the same euro area HICP weights averaged over 2017–2020 to aggregate our five-digit COICOP-level results for Switzerland.

The 11 COICOP categories missing in our data for Switzerland are fresh or chilled

seafood (01.1.3.3), frozen seafood (01.1.3.4), other preserved or processed fish and seafood-based preparations (01.1.3.6), milk, preserved (01.1.4.3), repair of furniture, furnishings and floor coverings (05.1.3.0), repair of household appliances (05.3.3.0), thermal-baths, corrective-gymnastic therapy, ambulance services and hire of therapeutic equipment (06.2.3.2), lubricants (07.2.2.4), removal and storage services (07.3.6.2), museums, libraries, zoological gardens (09.4.2.2), and accommodation services of other establishments (11.2.0.3).

[Table B.7](#) presents the comparison results for the frequency of price changes. Results are given for the mean and median frequencies of price changes and for samples including and excluding temporary sales. Price changes due to product substitutions are excluded in all samples. The corresponding results for the size of price changes are presented in [Table B.8](#).

Table B.7. Frequency of price adjustments: Switzerland versus euro area

	Including sales				Excluding sales			
	Mean		Median		Mean		Median	
	CH	EA	CH	EA	CH	EA	CH	EA
Total	15.2	11.9	12.8	9.6	12.9	8.3	7.4	5.7
Processed food	48.4	31.1	50.4	29.3	46.9	23.4	49.3	20.2
Unprocessed food	21.4	14.9	21.6	14.4	20.2	10.2	19.9	8.5
NEIG	12.6	12.4	14.5	12.0	6.5	6.3	3.3	5.1
Services	7.1	5.6	4.3	3.2	7.0	5.4	4.1	3.0

Notes: Mean and median frequencies of price adjustments in percent per month for Switzerland and the euro area. The results for the euro area are taken from [Gautier et al. \(2024\)](#) and calculated for the period 2011–2017 (Belgium: 2011–2015; Latvia: 2017) using a harmonized sample of 166 common products. The results for Switzerland are based on the same period and 155 of the 166 common products, representing 98.2% of their expenditure. Results for both economic areas use euro area HICP weights averaged over the period 2017–2020 to aggregate five-digit COICOP-level results to control for possible differences in consumption patterns. Both samples exclude price changes due to product substitutions. Temporary sales are excluded using sales flags by the respective national statistical offices.

Table B.8. Absolute size of price adjustments: Switzerland versus euro area

	Including sales				Excluding sales			
	Increases		Decreases		Increases		Decreases	
	CH	EA	CH	EA	CH	EA	CH	EA
Total	11.8	9.0	12.9	12.0	7.9	6.4	9.3	8.0
Processed food	9.8	12.3	9.7	14.5	8.8	10.0	8.6	10.6
Unprocessed food	6.9	8.3	7.2	10.4	5.3	5.7	5.6	6.1
NEIG	20.2	13.5	21.1	18.4	9.2	7.8	11.9	10.2
Services	8.1	5.0	9.9	6.5	7.9	5.0	9.5	6.2

Notes: Median size of price increases and absolute price decreases in percent per month for Switzerland and the euro area. The results for the euro area are taken from [Gautier et al. \(2024\)](#) and calculated for the period 2011–2017 (Belgium: 2011–2015; Latvia: 2017) using a harmonized sample of 166 common products. The results for Switzerland are based on the same period and 155 of the 166 common products, representing 98.2% of their expenditure. Results for both economic areas use euro area HICP weights averaged over the period 2017–2020 to aggregate five-digit COICOP-level results to control for possible differences in consumption patterns. Both samples exclude price changes due to product substitutions. Temporary sales are excluded using sales flags by the respective national statistical offices.

The comparison shows that prices are more flexible in Switzerland than in the euro area. The average frequency of price adjustments including temporary sales is 15.2 percent in Switzerland, whereas it is 11.9 percent in the euro area (see [Table B.7](#)). The results for Switzerland are comparable to those for Latvia (15.9 percent), Lithuania (13.3 percent), and Greece (12.7 percent), the countries for which [Gautier et al. \(2024\)](#) find the highest frequencies of price changes in the euro area. When temporary sales are excluded, the respective adjustment frequencies are 12.9 percent for Switzerland and 8.3 percent for the euro area. These findings also apply to the median frequencies of price changes.

Furthermore, while we observe a considerable increase in the frequency of price changes from 2008 to 2019 in Switzerland, the results for the euro area do not show any strong upward trend over the period from 2005 to 2019.

With respect to the size of price changes, we find that price changes in Switzerland

are, on average, slightly larger than those in the euro area. For the sample including temporary sales, the median absolute size of price increases (decreases) is 11.8 percent (12.9 percent) in Switzerland, compared to 9.0 percent (12.0 percent) in the euro area (see [Table B.8](#)). When we exclude price changes due to temporary sales, the difference is smaller for price increases (7.9 percent in Switzerland versus 6.4 percent in the euro area) but larger for absolute price decreases (9.3 percent versus 8.0 percent). Examining the sectoral differences, we note that while price changes for NEIG and services are larger in Switzerland, price changes for food are larger in the euro area.

B.6 Cross-sectional heterogeneity in the frequency and size of price changes

[Table B.9](#) summarizes median price-setting moments using the sample including price changes due to temporary sales and product substitutions.

Table B.9. Cross-sectional price-setting moments - median moments

	Weight	Frequency of price adjustments					Size of price adjustments						
		Changes	Increases	Decreases	Sales	Share of Increases	Absolute Changes	Average Changes	Increases	Decreases	Sales	Std. dev.	Kurtosis
		f	f^+	f^-	f^s	$\frac{f^+}{f}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	$Kur(z)$
Food	13.2	27.8	13.3	11.1	0.0	53.3	6.7	0.3	6.1	-6.3	22.7	7.1	3.3
Unprocessed food	3.5	43.8	20.5	20.0	0.0	50.0	8.4	0.1	8.1	-8.2	26.2	8.9	4.3
Processed food	9.7	22.6	11.3	9.1	0.0	54.5	6.0	0.3	5.3	-5.4	22.3	6.3	3.0
NEIG	17.6	13.6	5.6	5.4	1.3	50.0	12.2	0.1	10.6	-12.6	26.0	9.4	2.5
Durable goods	8.0	15.4	6.1	5.3	0.0	50.0	9.5	0.0	8.1	-9.8	22.3	6.6	2.5
Semi-durable goods	7.2	13.5	5.3	6.1	3.7	50.0	19.0	-0.0	15.4	-18.3	32.4	13.9	2.5
Non-durable goods	2.4	11.2	5.7	4.2	0.0	55.6	8.4	0.6	7.6	-8.8	24.4	7.8	2.4
Energy	4.0	95.9	37.2	26.6	0.0	50.0	2.6	-0.0	2.0	-2.0	4.0	1.0	3.5
Services	20.5	3.1	2.0	0.0	0.0	71.4	8.2	2.4	7.4	-10.2	22.3	6.0	2.3
Housing	1.8	16.7	10.0	2.2	0.0	73.8	4.2	1.8	3.9	-4.7		3.7	4.5
Transport	1.3	7.1	6.6	0.0	0.0	97.3	2.7	1.2	2.3	-2.9	21.7	1.7	2.3
Communication	2.6	0.0	0.0	0.0	0.0	66.7	6.2	0.2	4.7	-8.2		2.4	1.5
Recreation	13.3	4.0	2.8	0.0	0.0	69.2	8.7	2.7	7.9	-10.9	22.3	6.6	2.4
Miscellaneous	2.2	0.0	0.0	0.0	0.0	100.0	3.3	1.2	3.5	-2.5	68.1	2.1	1.9
Food & non-alcoholic beverages	10.8	27.6	13.0	11.5	0.0	50.0	6.9	0.2	6.5	-6.5	23.6	7.4	3.2
Alcoholic beverages & tobacco	2.4	28.5	15.6	9.6	0.7	58.3	4.3	0.4	3.6	-4.6	18.4	4.1	4.0
Clothing & footwear	3.6	19.5	6.4	9.3	9.1	48.9	33.5	-1.5	30.0	-28.9	36.1	21.3	3.0
Housing & energy	3.3	94.3	11.1	6.4	0.0	52.0	4.3	0.5	3.4	-3.6	22.4	1.9	2.4
Household goods & services	4.2	13.3	6.2	5.7	5.6	50.0	16.9	0.1	15.3	-17.1	23.2	11.6	2.2
Healthcare	1.5	0.0	0.0	0.0	0.0	52.8	4.6	0.2	4.2	-5.2	21.6	4.6	1.8
Transport	7.0	44.4	9.1	5.7	0.0	59.1	2.3	0.3	2.0	-2.1	5.5	1.0	3.2
Communications	2.8	0.0	0.0	0.0	0.0	51.0	7.3	0.3	6.1	-8.2	16.1	5.3	2.0
Recreation & culture	7.4	17.2	8.1	6.8	0.0	52.2	10.5	0.4	9.4	-11.4	22.3	8.9	3.2
Education	0.2	0.0	0.0	0.0	0.0	83.9	13.0	5.2	12.3	-14.1	68.1	12.8	3.7
Restaurants & hotels	8.5	3.1	2.1	0.0	0.0	78.0	8.2	3.2	7.4	-10.2	24.5	5.4	1.8
Other goods & services	3.5	10.0	4.9	2.9	0.0	58.3	8.9	1.0	7.8	-9.3	22.7	8.2	2.4
Fully online	3.7	33.3	14.6	14.6	0.0	50.0	10.4	-0.1	9.3	-11.0	18.2	9.2	3.4
Partially online	5.2	19.4	7.4	9.1	11.5	50.0	27.5	-0.9	23.7	-24.8	30.4	18.2	2.9
Offline	46.4	14.3	6.0	4.1	0.0	57.1	6.5	0.7	5.7	-6.3	22.6	5.4	2.8

Notes: Median price-setting moments by sector, COICOP two-digit main group, and mode of price collection, for the Swiss CPI microdata sample from January 2008 to December 2025, including price changes due to temporary sales and product substitutions. Sectors correspond to the COICOP-HICP special aggregates defined by Eurostat. COICOP main groups correspond to COICOP two-digit divisions. The frequency measures are weighted averages of variety-level shares of price changes, increases, decreases, and sales-related price changes, respectively. "Share of increases" is the share of price increases in all non-zero price changes. The size measures are weighted averages of the mean log price change ("Average"), the mean absolute log price change ("Absolute"), the mean size of price increases and decreases, the mean absolute size of sales-related price changes, the standard deviation of absolute log price changes, and the kurtosis of standardized price changes. "Weight" is the average CPI expenditure weight over the sample period, in percent. All moments are first computed at the variety level and then aggregated as a weighted median across varieties using CPI expenditure weights. Values are reported in percent per month.

[Table B.10](#) summarizes average price-setting moments using the sample excluding price changes due to temporary sales but including price changes due to product substitutions.

Table B.10. Cross-sectional price-setting moments - excluding sales, including substitutions

	Weight	Frequency of price adjustments					Size of price adjustments						
		Changes	Increases	Decreases	Sales	Share of Increases	Absolute Changes	Average Changes	Increases	Decreases	Sales	Std. dev.	Kurtosis
		f	f^+	f^-	f^s	$\frac{f^+}{f}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	$Kur(z)$
Food	13.2	29.1	15.5	13.6		53.9	6.8	0.3	6.6	-6.8		6.4	4.3
Unprocessed food	3.5	44.1	22.2	21.9		50.9	9.5	0.1	9.2	-9.0		8.2	5.0
Processed food	9.7	24.0	13.2	10.8		54.9	5.9	0.4	5.7	-6.0		5.8	4.0
NEIG	17.6	13.9	7.4	6.6		53.8	9.1	0.1	8.7	-9.5		6.8	3.0
Durable goods	8.0	17.0	8.9	8.1		53.4	7.4	-0.2	6.9	-7.8		5.2	3.0
Semi-durable goods	7.2	10.5	5.5	5.0		53.0	11.3	0.1	10.9	-11.9		8.6	3.0
Non-durable goods	2.4	12.1	7.1	5.1		57.1	8.1	0.7	7.7	-8.5		6.8	3.0
Energy	4.0	77.3	39.6	37.7		49.9	3.5	-0.1	2.8	-3.0		1.4	5.4
Services	20.5	15.2	8.9	6.3		67.0	9.9	1.8	9.3	-11.9		7.4	3.5
Housing	1.8	21.6	15.4	6.3		71.2	5.1	2.0	4.9	-5.5		4.1	5.8
Transport	1.3	22.8	20.4	2.4		82.3	4.1	1.6	3.8	-5.2		2.9	8.1
Communication	2.6	7.5	4.7	2.9		53.7	9.6	-1.1	8.6	-11.9		5.6	2.0
Recreation	13.3	16.7	9.2	7.5		66.8	10.4	1.9	9.8	-12.5		7.8	3.3
Miscellaneous	2.2	8.0	5.5	2.4		70.2	6.6	2.1	6.5	-8.1		6.1	2.8
Food & non-alcoholic beverages	10.8	29.4	15.2	14.2		52.7	7.2	0.3	7.0	-7.1		6.7	4.0
Alcoholic beverages & tobacco	2.4	27.5	16.5	11.0		59.8	5.2	0.4	4.8	-5.6		5.1	5.8
Clothing & footwear	3.6	10.0	5.2	4.8		51.6	15.3	-0.1	15.1	-16.0		11.1	3.5
Housing & energy	3.3	60.3	31.9	28.4		54.1	5.4	0.0	4.4	-4.9		2.6	3.8
Household goods & services	4.2	7.7	4.3	3.4		54.9	9.2	0.3	8.6	-9.5		7.0	2.2
Healthcare	1.5	5.5	3.3	2.2		56.9	6.1	0.4	5.9	-6.7		5.3	2.2
Transport	7.0	46.8	25.0	21.8		55.3	3.4	0.2	3.0	-3.4		1.7	5.3
Communications	2.8	8.1	4.7	3.3		54.5	9.4	-0.3	9.1	-10.4		6.3	2.8
Recreation & culture	7.4	27.1	14.0	13.0		54.2	11.1	0.1	10.6	-11.8		8.9	4.0
Education	0.2	10.4	8.9	1.5		81.0	16.5	7.0	15.3	-20.7		18.1	4.7
Restaurants & hotels	8.5	10.6	6.0	4.5		69.3	9.6	2.2	9.0	-11.7		6.6	2.6
Other goods & services	3.5	10.9	6.3	4.6		59.0	7.4	0.9	7.0	-7.6		6.2	2.9
Fully online	3.7	37.7	18.7	19.0		50.9	11.7	-0.4	11.3	-12.1		9.6	4.3
Partially online	5.2	8.6	4.6	4.0		53.3	13.4	0.0	13.0	-14.2		9.7	3.1
Offline	46.4	24.3	13.2	11.1		57.7	7.1	0.7	6.7	-7.3		5.5	3.9

Notes: Average price-setting moments by sector, COICOP two-digit main group, and mode of price collection, for the Swiss CPI microdata sample from January 2008 to December 2025, excluding price changes due to temporary sales but including price changes due to product substitutions. Sectors correspond to the COICOP-HICP special aggregates defined by Eurostat. COICOP main groups correspond to COICOP two-digit divisions. The frequency measures are weighted averages of variety-level shares of price changes, increases, decreases, and sales-related price changes, respectively. "Share of increases" is the share of price increases in all non-zero price changes. The size measures are weighted averages of the mean log price change ("Average"), the mean absolute log price change ("Absolute"), the mean size of price increases and decreases, the mean absolute size of sales-related price changes, the standard deviation of absolute log price changes, and the kurtosis of standardized price changes. "Weight" is the average CPI expenditure weight over the sample period, in percent. All moments are first computed at the variety level and then aggregated as a weighted mean across varieties using CPI expenditure weights. Values are reported in percent per month.

[Table B.11](#) summarizes average price-setting moments using the sample including price changes due to temporary sales but excluding price changes due to product substitutions.

Table B.11. Cross-sectional price-setting moments - including sales, excluding substitutions

	Weight	Frequency of price adjustments					Size of price adjustments						
		Changes	Increases	Decreases	Sales	Share of Increases	Absolute Changes	Average Changes	Increases	Decreases	Sales	Std. dev.	Kurtosis
		f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	$Kur(z)$
Food	13.2	29.3	15.5	13.7	1.2	53.6	7.7	0.3	7.5	-7.8	23.5	7.2	4.3
Unprocessed food	3.5	42.9	21.5	21.4	1.4	50.6	10.0	0.0	9.6	-9.6	27.1	8.9	5.0
Processed food	9.7	24.6	13.5	11.2	1.1	54.6	6.9	0.4	6.7	-7.1	21.8	6.7	4.1
NEIG	17.6	15.6	7.5	8.0	5.9	49.5	15.7	-2.1	13.9	-16.3	28.4	10.2	3.1
Durable goods	8.0	18.1	9.0	9.1	5.6	49.6	12.0	-1.4	11.0	-12.8	23.4	7.7	3.1
Semi-durable goods	7.2	13.2	5.7	7.5	7.8	46.7	21.7	-4.0	18.6	-21.8	32.8	13.6	3.0
Non-durable goods	2.4	12.9	7.4	5.5	1.9	56.6	10.5	0.6	9.9	-11.1	27.3	8.6	3.2
Energy	4.0	77.3	39.6	37.7	0.1	49.9	3.5	-0.1	2.9	-3.0	5.4	1.4	5.5
Services	20.5	13.4	7.9	5.5	0.2	70.2	9.7	2.2	9.1	-12.0	23.4	7.3	3.6
Housing	1.8	19.9	14.8	5.1	0.0	72.7	4.9	2.1	4.8	-5.2		3.9	5.5
Transport	1.3	21.6	19.5	2.1	0.2	82.4	4.2	1.6	3.9	-5.3	20.8	2.9	8.3
Communication	2.6	5.0	2.9	2.1	0.0	61.8	7.6	0.5	7.0	-9.4		3.0	2.2
Recreation	13.3	14.8	8.2	6.6	0.2	69.7	10.3	2.3	9.7	-12.7	23.4	7.8	3.3
Miscellaneous	2.2	6.9	5.0	1.9	0.0	74.4	6.1	2.4	5.9	-7.6	22.3	4.7	2.9
Food & non-alcoholic beverages	10.8	29.4	15.2	14.2	1.1	52.4	7.9	0.3	7.7	-7.9	25.0	7.5	4.1
Alcoholic beverages & tobacco	2.4	28.5	16.9	11.6	1.8	59.1	6.9	0.3	6.4	-7.3	18.8	6.0	5.4
Clothing & footwear	3.6	15.4	5.3	10.1	14.6	39.0	33.5	-8.5	28.6	-32.0	36.8	18.6	3.2
Housing & energy	3.3	59.8	31.7	28.1	0.2	53.9	6.1	-0.0	4.9	-5.5	24.7	2.8	3.7
Household goods & services	4.2	12.9	6.6	6.3	8.3	51.2	17.7	-0.9	16.5	-18.6	26.3	11.8	2.7
Healthcare	1.5	4.5	2.9	1.7	0.7	58.3	7.1	-0.3	6.3	-9.1	21.8	6.0	2.3
Transport	7.0	45.7	24.2	21.4	1.4	54.2	3.5	0.0	3.1	-3.5	9.8	1.7	5.3
Communications	2.8	5.7	3.1	2.6	0.3	57.4	7.4	-0.2	6.7	-8.8	16.8	4.5	2.8
Recreation & culture	7.4	24.2	12.4	11.8	2.0	53.9	12.0	-0.2	11.2	-12.7	23.5	9.2	3.8
Education	0.2	8.3	7.6	0.8	0.0	87.1	10.8	6.6	10.4	-15.9	22.3	10.3	4.2
Restaurants & hotels	8.5	9.9	5.7	4.2	0.2	73.2	9.6	2.7	8.9	-12.3	27.5	6.8	2.7
Other goods & services	3.5	11.2	6.3	5.0	1.9	58.2	10.4	0.4	9.3	-11.3	26.5	8.6	3.2
Fully online	3.7	33.1	16.1	16.9	1.7	50.5	11.4	-0.7	10.8	-11.9	19.3	9.1	4.1
Partially online	5.2	16.1	6.5	9.6	14.9	42.7	29.3	-6.2	25.4	-28.7	32.0	16.6	3.2
Offline	46.4	24.0	12.9	11.1	1.2	57.8	8.1	0.6	7.6	-8.5	24.0	6.3	4.0

Notes: Average price-setting moments by sector, COICOP two-digit main group, and mode of price collection, for the Swiss CPI microdata sample from January 2008 to December 2025, including price changes due to temporary sales but excluding price changes due to product substitutions. Sectors correspond to the COICOP-HICP special aggregates defined by Eurostat. COICOP main groups correspond to COICOP two-digit divisions. The frequency measures are weighted averages of variety-level shares of price changes, increases, decreases, and sales-related price changes, respectively. "Share of increases" is the share of price increases in all non-zero price changes. The size measures are weighted averages of the mean log price change ("Average"), the mean absolute log price change ("Absolute"), the mean size of price increases and decreases, the mean absolute size of sales-related price changes, the standard deviation of absolute log price changes, and the kurtosis of standardized price changes. "Weight" is the average CPI expenditure weight over the sample period, in percent. All moments are first computed at the variety level and then aggregated as a weighted mean across varieties using CPI expenditure weights. Values are reported in percent per month.

[Table B.12](#) summarizes average price-setting moments using the sample excluding price changes due to temporary sales and product substitutions.

Table B.12. Cross-sectional price-setting moments - excluding sales, excluding substitutions

	Weight	Frequency of price adjustments					Size of price adjustments						
		Changes	Increases	Decreases	Sales	Share of Increases	Absolute Changes	Average Changes	Increases	Decreases	Sales	Std. dev.	Kurtosis
		f	f^+	f^-	f^s	$\frac{f^+}{f}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	$Kur(z)$
Food	13.2	27.9	14.8	13.0		53.9	6.4	0.3	6.2	-6.3		5.9	4.1
Unprocessed food	3.5	41.4	20.8	20.6		50.8	9.0	0.1	8.5	-8.4		7.5	4.8
Processed food	9.7	23.3	12.8	10.5		55.0	5.5	0.4	5.3	-5.6		5.3	3.9
NEIG	17.6	11.3	5.9	5.4		53.5	7.5	-0.1	6.8	-7.8		5.3	2.7
Durable goods	8.0	14.7	7.4	7.2		51.9	6.5	-0.6	5.8	-7.0		4.4	2.8
Semi-durable goods	7.2	6.9	3.6	3.2		53.6	8.7	0.0	8.0	-8.9		6.0	2.3
Non-durable goods	2.4	11.4	6.7	4.8		57.6	7.4	0.8	7.1	-7.6		6.0	2.8
Energy	4.0	77.2	39.5	37.7		49.9	3.5	-0.1	2.8	-3.0		1.4	5.4
Services	20.5	13.3	7.8	5.4		70.5	9.3	2.2	8.9	-11.6		7.1	3.6
Housing	1.8	19.9	14.8	5.1		72.7	4.9	2.1	4.8	-5.2		3.9	5.5
Transport	1.3	21.5	19.4	2.1		82.5	4.1	1.7	3.8	-5.1		2.8	8.3
Communication	2.6	5.0	2.9	2.1		61.8	7.6	0.5	7.0	-9.4		3.0	2.2
Recreation	13.3	14.7	8.2	6.6		70.1	9.8	2.3	9.4	-12.3		7.6	3.3
Miscellaneous	2.2	6.9	5.0	1.9		74.4	6.1	2.4	5.9	-7.6		4.7	2.9
Food & non-alcoholic beverages	10.8	28.1	14.6	13.5		52.7	6.7	0.3	6.5	-6.6		6.1	3.8
Alcoholic beverages & tobacco	2.4	26.7	16.1	10.6		60.1	4.9	0.4	4.5	-5.2		4.8	5.6
Clothing & footwear	3.6	3.3	1.8	1.5		51.9	10.6	-0.1	10.1	-11.0		6.2	1.7
Housing & energy	3.3	59.6	31.6	28.0		54.2	5.3	0.0	4.3	-4.8		2.6	3.7
Household goods & services	4.2	6.5	3.6	2.9		55.4	8.4	0.3	7.7	-8.7		6.6	2.2
Healthcare	1.5	4.3	2.7	1.5		59.2	5.7	-0.1	4.9	-6.8		4.4	2.2
Transport	7.0	45.4	24.1	21.3		54.5	3.3	0.1	2.9	-3.2		1.6	5.2
Communications	2.8	5.5	3.1	2.5		57.3	6.9	-0.1	6.2	-8.0		3.9	2.8
Recreation & culture	7.4	23.1	11.9	11.2		54.4	10.1	0.1	9.6	-10.9		8.0	3.8
Education	0.2	8.3	7.5	0.8		87.2	10.7	6.6	10.4	-15.8		10.3	4.1
Restaurants & hotels	8.5	9.8	5.6	4.2		73.7	9.1	2.8	8.6	-11.7		6.5	2.7
Other goods & services	3.5	9.6	5.5	4.1		59.9	6.4	1.0	6.1	-6.5		5.4	2.8
Fully online	3.7	32.1	15.7	16.4		50.3	10.8	-0.6	10.2	-11.3		8.7	4.1
Partially online	5.2	3.9	2.2	1.7		53.9	10.2	0.0	9.5	-10.8		6.5	1.9
Offline	46.4	23.1	12.5	10.6		58.4	6.5	0.8	6.2	-6.6		5.0	3.9

Notes: Average price-setting moments by sector, COICOP two-digit main group, and mode of price collection, for the Swiss CPI microdata sample from January 2008 to December 2025, excluding price changes due to temporary sales and product substitutions. Sectors correspond to the COICOP-HICP special aggregates defined by Eurostat. COICOP main groups correspond to COICOP two-digit divisions. The frequency measures are weighted averages of variety-level shares of price changes, increases, decreases, and sales-related price changes, respectively. "Share of increases" is the share of price increases in all non-zero price changes. The size measures are weighted averages of the mean log price change ("Average"), the mean absolute log price change ("Absolute"), the mean size of price increases and decreases, the mean absolute size of sales-related price changes, the standard deviation of absolute log price changes, and the kurtosis of standardized price changes. "Weight" is the average CPI expenditure weight over the sample period, in percent. All moments are first computed at the variety level and then aggregated as a weighted mean across varieties using CPI expenditure weights. Values are reported in percent per month.

[Table B.13](#) summarizes average price-setting moments at the expenditure-item (five-digit COICOP subclass) level.

Table B.13. Price-setting moments by expenditure item

	Weight	Frequency of price adjustments					Size of price adjustments						
		Changes	Increases	Decreases	Sales	Share of Increases	Absolute Changes	Average Changes	Increases	Decreases	Sales	Std. dev.	Kurtosis
		f	f^+	f^-	f^s	$\frac{f^+}{f}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	$Kur(z)$
01003: Rice	0.0	22.4	12.1	10.3	1.2	53.7	9.3	0.6	9.0	-9.6	22.9	8.1	3.4
01008: Flour and other cereals	0.1	17.4	9.3	8.1	0.7	53.2	8.9	0.4	8.5	-8.7	25.1	8.0	2.9
01015: Bread	0.5	12.3	7.0	5.3	0.3	56.0	4.8	0.6	4.8	-4.8	24.2	5.2	3.1
01027: Small baked goods	0.2	22.7	11.9	10.8	0.1	55.1	4.9	1.0	5.0	-4.1	26.1	4.4	3.8
01036: Viennese pastries, pastry products	0.3	27.7	14.5	13.2	0.1	52.5	4.6	0.4	4.7	-4.3	19.4	4.3	5.7
01048: Biscuit/rusk products	0.3	16.4	9.0	7.4	0.7	53.7	7.4	0.3	7.0	-7.7	23.6	7.6	2.9
01056: Pizza and quiche	0.1	37.3	19.3	17.9	1.2	51.7	6.7	0.2	6.8	-7.0	29.2	7.8	3.6
01058: Pasta	0.1	25.0	12.9	12.1	1.4	51.4	12.0	0.4	12.1	-11.9	26.6	10.4	3.2
01065: Other cereal products	0.1	20.8	10.9	9.9	1.4	52.6	7.3	0.2	7.1	-7.5	25.4	7.4	2.6
01073: Breakfast cereals	0.1	27.0	14.6	12.4	1.0	54.3	6.7	0.3	6.2	-6.9	22.8	6.8	3.9
01076: Beef	0.4	39.5	20.9	18.6	1.8	52.8	8.2	0.3	8.1	-8.4	23.9	9.0	4.4
01088: Veal	0.1	37.9	20.6	17.3	1.8	54.3	7.8	0.3	7.6	-8.1	19.9	7.7	3.8
01097: Pork	0.3	41.2	21.1	20.0	2.1	51.5	7.5	0.1	7.5	-7.7	25.5	8.8	5.6
01107: Lamb	0.1	35.6	18.9	16.7	1.6	53.3	8.6	0.4	8.2	-8.4	24.3	8.6	3.7
01115: Poultry	0.4	36.7	18.5	18.3	1.7	50.4	6.9	0.1	7.0	-7.0	24.8	7.8	4.6
01133: Other meat, fresh	0.1	33.2	16.5	16.7	1.4	51.5	7.0	0.4	6.9	-6.7	21.3	6.9	4.2
01145: Sausages	0.5	17.4	9.4	8.1	1.4	53.5	9.8	0.4	10.0	-10.4	25.3	10.1	3.0
01155: Cold cuts and other meat products	0.5	40.8	21.3	19.5	0.7	52.2	4.4	0.2	4.5	-4.4	21.9	6.1	7.3
01168: Preparations of raw meat ready to cook	0.1	60.9	31.1	29.8	0.6	51.2	5.5	0.1	5.4	-5.5	22.6	6.5	8.0
01170: Cold cuts, other meat products and meat preparations	0.5	26.0	13.2	12.7	1.1	51.8	7.0	0.2	6.7	-7.0	23.2	7.2	4.6
01180: Fresh fish	0.2	53.4	27.1	26.3	1.1	50.6	7.8	0.2	7.7	-7.7	26.2	8.2	6.2
01187: Frozen fish	0.1	30.2	15.8	14.3	1.3	52.7	7.1	0.2	6.9	-7.5	24.8	8.1	3.1
01192: Tinned fish and smoked fish	0.1	26.7	14.1	12.6	0.8	53.7	8.7	0.5	8.3	-9.1	28.0	8.9	4.2

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
01200: Whole milk	0.1	15.5	8.5	7.0	0.4	54.1	5.1	0.6	5.2	-4.7	19.7	4.8	2.2
01207: Low fat milk	0.1	18.8	10.2	8.6	0.5	52.8	4.6	0.4	4.8	-4.4	19.0	4.4	2.2
01218: Hard and semi-hard cheese	0.5	38.9	19.9	18.9	1.2	51.6	7.2	0.2	6.8	-7.1	24.2	7.1	5.6
01230: Fresh, soft and melted cheese	0.3	32.0	16.5	15.5	0.8	51.7	5.1	0.2	5.1	-5.2	23.8	5.8	5.3
01246: Drink and milk desserts	0.2	19.2	10.3	8.8	1.1	53.2	8.2	0.2	8.0	-8.6	25.4	7.5	2.5
01247: Yoghurt	0.2	23.9	12.3	11.5	1.1	51.9	7.9	0.4	7.8	-8.0	29.1	7.9	3.4
01265: Cream	0.1	15.0	8.1	6.9	0.8	51.2	6.1	0.0	6.0	-6.2	16.8	5.3	1.8
01278: Eggs	0.2	35.6	18.7	16.8	0.5	52.7	3.0	0.3	3.1	-3.0	21.8	4.1	5.9
01285: Butter	0.1	18.0	10.6	7.5	0.6	56.8	3.7	0.7	3.8	-3.6	15.8	3.7	2.5
01290: Olive oil	0.1	31.8	18.1	13.7	1.1	56.4	9.5	1.0	9.2	-9.5	23.8	11.1	4.9
01291: Other edible oils	0.0	29.0	15.4	13.6	1.7	52.1	9.6	0.3	9.4	-9.8	25.8	10.6	3.5
01293: Margarine, fats, edible oils	0.1	20.1	10.7	9.4	1.1	52.8	8.3	0.3	8.1	-8.8	25.0	8.6	2.5
01294: Margarine and edible fats	0.0	33.5	17.7	15.8	1.9	51.1	5.4	0.3	5.8	-5.2	21.5	6.2	2.4
01308: Citrus fruit	0.1	49.4	24.9	24.5	1.3	51.0	13.6	0.2	13.3	-13.0	38.5	11.6	4.7
01316: Stone fruit	0.1	65.7	31.0	34.7	2.0	50.5	28.0	2.7	26.8	-23.6	40.4	19.0	5.0
01325: Pome fruit	0.1	46.0	23.1	22.9	1.3	50.3	10.7	0.2	10.7	-10.4	28.0	10.5	4.9
01333: Bananas	0.1	43.1	21.6	21.5	2.3	50.0	8.3	-0.1	8.5	-8.4	26.4	8.4	6.0
01335: Tropical fruits	0.1	54.6	28.1	26.5	1.3	51.5	16.5	0.9	16.7	-15.7	39.3	14.0	4.9
01338: Melons and grapes	0.1	62.2	30.4	31.8	2.9	49.5	22.9	-0.0	22.1	-21.9	37.8	16.0	5.6
01346: Berries	0.1	70.4	34.4	36.0	1.4	49.2	21.5	-0.0	21.5	-20.1	32.1	15.8	4.5
01347: Dried fruit and nuts	0.2	25.2	13.0	12.2	0.8	51.1	7.9	0.3	7.9	-7.7	21.4	7.6	3.4
01352: Preserved fruit	0.0	29.8	16.6	13.2	0.7	55.7	6.6	0.5	6.2	-6.7	21.0	6.0	1.9
01358: Frozen fruit	0.0	38.0	19.9	18.0	0.4	52.9	5.6	0.2	5.4	-5.7	23.4	6.2	4.0
01361: Fruiting vegetables	0.2	69.7	34.2	35.5	1.3	48.9	19.3	-0.3	17.7	-17.5	37.6	12.8	6.3
01369: Root vegetables	0.2	56.6	26.5	30.1	0.7	47.0	12.0	-0.3	11.7	-10.8	33.6	9.4	5.6
01379: Salad vegetables	0.2	56.9	28.0	28.9	1.5	49.4	13.9	-0.1	13.2	-13.0	35.0	11.0	6.5
01391: Brassicas	0.1	63.3	30.8	32.4	1.1	48.5	16.9	-0.2	15.9	-15.2	36.8	12.1	4.7

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
01400: Onions and leeks	0.1	41.6	19.2	22.4	0.2	46.8	12.7	-0.4	12.6	-12.0	30.0	11.3	5.4
01407: Other vegetables, aromatic herbs and mushrooms	0.1	45.0	22.2	22.8	1.0	50.6	12.2	0.1	12.3	-11.9	34.3	10.9	5.7
01417: Potatoes	0.1	49.3	24.7	24.6	0.5	50.9	13.1	0.2	12.5	-12.4	30.2	11.2	4.8
01423: Dried and tinned vegetables and mushrooms	0.1	19.7	10.4	9.4	0.7	53.1	8.0	0.5	8.0	-8.2	23.5	7.4	2.2
01425: Preserved vegetables	0.0	32.5	17.1	15.4	0.6	51.5	5.9	0.1	6.0	-6.0	22.8	5.7	2.0
01440: Potato products	0.1	21.3	11.2	10.0	1.5	51.9	8.7	0.2	8.6	-9.1	24.7	8.6	2.2
01449: Jam and honey	0.1	17.7	9.6	8.1	0.8	54.5	7.8	0.8	7.8	-7.8	23.1	7.7	2.9
01454: Crisps	0.1	23.8	12.6	11.2	1.0	52.9	7.5	0.2	7.3	-7.9	23.3	7.6	4.6
01455: Chocolate	0.4	21.6	12.2	9.4	1.0	56.1	7.7	0.6	7.3	-8.1	23.9	8.8	6.2
01461: Sweets and chewing gum	0.1	12.2	6.6	5.6	1.0	53.9	6.1	0.5	6.2	-6.2	25.8	7.1	2.7
01468: Ice-cream	0.1	29.3	15.7	13.6	1.4	54.2	7.6	0.3	7.3	-7.8	26.3	8.0	2.6
01475: Sugar	0.0	16.8	8.5	8.3	0.2	51.3	5.7	0.2	5.5	-5.3	23.1	5.5	2.2
01478: Sauces and condiments	0.2	25.9	13.7	12.2	1.4	52.8	7.3	0.3	7.2	-7.3	23.3	7.5	3.4
01482: Dry soups, spices, sauces	0.5	17.1	9.1	8.0	0.9	53.1	8.0	0.4	7.8	-8.3	23.1	6.9	2.5
01486: Salt, spices and culinary herbs	0.0	11.5	6.4	5.1	0.3	57.6	5.1	0.7	5.2	-5.0	21.7	6.1	2.5
01491: Soups and other food products	0.3	29.5	15.1	14.3	1.2	51.2	6.0	0.2	5.9	-5.9	23.7	6.0	3.1
01505: Ready-made foods	0.2	31.0	16.1	14.9	0.9	52.3	5.9	0.3	5.9	-6.0	25.9	6.4	3.0
01530: Coffee (retail)	0.3	28.2	15.0	13.2	1.6	53.2	8.6	0.4	8.6	-8.9	21.3	8.3	2.8
01532: Tea (retail)	0.1	20.9	11.2	9.6	0.8	53.2	5.7	0.3	5.9	-6.0	24.2	5.7	2.8
01536: Baby food	0.0	42.4	21.6	20.8	1.4	49.7	5.3	-0.1	5.1	-5.1	24.5	5.2	2.9
01539: Cocoa and chocolate powder	0.0	24.6	13.2	11.4	1.1	54.4	6.6	0.6	6.7	-6.6	20.5	7.9	4.9
01545: Natural mineral water	0.1	14.7	7.9	6.8	1.3	55.0	13.9	0.3	13.7	-15.1	29.0	13.1	2.7
01552: Soft drinks	0.2	16.2	8.6	7.6	0.9	53.1	10.6	0.3	10.1	-11.2	26.0	10.1	2.9
01563: Fruit or vegetable juices	0.2	17.4	9.4	8.0	1.4	53.9	10.4	0.6	10.4	-10.7	22.0	10.2	4.2
02003: Spirits/brandies (retail)	0.1	18.0	9.7	8.4	1.1	54.4	5.9	0.4	5.8	-6.0	12.2	6.1	2.8

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
02010: Liqueurs and aperitifs	0.1	18.9	10.0	8.8	1.0	53.7	6.3	0.2	5.9	-6.5	14.3	6.1	2.6
02019: Swiss red wine	0.1	17.2	9.5	7.6	1.9	57.0	11.8	0.7	10.8	-12.4	22.8	9.3	5.4
02031: Foreign red wine	0.4	28.3	15.2	13.1	3.1	53.6	14.6	0.1	13.7	-15.3	23.3	12.1	7.1
02046: Swiss white wine	0.1	20.9	11.7	9.2	1.5	57.6	11.0	0.8	10.3	-12.1	22.5	9.0	6.8
02056: Foreign white wine	0.1	30.9	16.7	14.1	2.8	53.9	12.2	0.1	11.6	-13.0	21.2	10.4	9.1
02058: Sparkling wine	0.1	31.7	17.0	14.7	3.1	53.4	12.6	0.3	11.4	-12.2	21.1	10.5	9.9
02061: Lager beer, light	0.1	50.5	26.1	24.4	1.3	51.5	7.0	0.2	7.4	-7.0	24.7	9.2	9.2
02062: Specialty beers	0.1	54.0	29.1	24.9	0.8	53.4	6.4	0.3	6.2	-6.5	18.5	6.7	5.2
02063: Non-alcoholic beers and beer-based beverages	0.1	39.9	21.2	18.8	2.7	53.0	8.6	0.3	8.0	-8.7	22.9	8.8	6.0
02064: Beer (retail)	0.2	26.5	14.1	12.4	1.7	54.2	8.9	0.6	8.7	-9.1	21.2	9.0	3.8
02076: Cigarettes	1.1	34.7	22.1	12.7	1.3	63.5	2.1	0.4	1.9	-2.4	7.0	2.3	5.2
02082: Other tobaccos	0.2	20.6	13.5	7.1	1.6	63.3	4.7	0.2	4.2	-5.5	11.5	4.6	3.4
03004: Jackets for men	0.2	27.6	13.2	14.4	17.1	41.0	34.8	-6.5	30.2	-30.6	38.0	21.7	5.7
03015: Men's suits	0.1	23.2	11.2	11.9	13.5	48.4	33.6	0.3	30.9	-28.4	34.4	21.8	3.4
03020: Men's trousers	0.2	23.5	11.2	12.2	13.2	46.9	32.3	-1.6	29.3	-28.4	34.6	20.6	3.7
03027: Men's shirts	0.1	22.3	10.9	11.4	15.7	47.7	32.7	-1.3	29.3	-29.3	34.7	20.2	3.4
03033: Men's knitwear	0.2	24.4	11.7	12.7	15.9	45.3	35.3	-3.1	32.5	-31.6	38.7	22.3	4.6
03041: Men's underwear	0.1	11.5	6.1	5.4	5.3	50.8	27.2	-0.2	25.4	-25.8	30.7	18.0	2.2
03061: Women's coats and jack- ets	0.2	33.4	15.5	17.9	19.6	42.3	35.7	-4.8	32.1	-31.8	37.1	23.0	9.8
03067: Costumes, pantsuits, dresses	0.1	33.9	16.1	17.9	29.7	35.8	36.4	-9.0	37.1	-28.4	39.4	22.5	4.2
03074: Women's skirts and dresses	0.2	33.4	15.2	18.3	20.9	40.8	39.5	-5.3	35.9	-33.7	39.2	23.9	6.6
03079: Women's trousers	0.3	28.8	13.2	15.6	17.3	43.4	36.2	-3.4	33.0	-31.0	38.1	22.8	4.6
03086: Jackets	0.3	31.1	14.1	17.0	24.6	39.6	38.6	-6.1	36.4	-32.6	40.8	22.8	4.3
03093: Women's blouses	0.1	31.9	14.6	17.3	22.2	41.4	38.8	-5.0	36.0	-33.4	39.9	23.2	7.3
03099: Women's jumpers	0.3	30.0	14.1	15.9	22.6	41.6	37.7	-5.7	33.7	-33.0	40.1	22.2	7.4
03106: Women's underwear	0.2	15.3	7.9	7.5	7.2	49.9	31.4	-1.3	28.7	-30.0	36.7	18.5	2.2
03126: Children's jackets	0.0	31.1	14.6	16.5	21.3	39.7	36.5	-7.5	33.1	-33.1	39.4	21.4	5.5

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
03134: Children's trousers and skirts	0.1	32.8	14.8	18.0	20.4	42.1	38.0	-4.0	36.8	-32.8	38.3	21.7	4.7
03141: Children's knitwear	0.1	29.7	14.0	15.7	19.7	44.6	36.8	-3.4	34.2	-32.7	37.6	22.2	5.0
03148: Babies' clothing	0.1	28.7	13.4	15.3	16.6	43.6	36.6	-4.0	34.0	-33.5	38.8	20.2	4.3
03150: Children's underwear	0.0	18.4	8.8	9.6	10.8	47.3	33.3	-0.9	32.2	-29.8	36.5	20.4	2.3
03169: Clothing fabrics	0.0	2.4	1.5	0.8	0.1	66.3	10.5	3.3	10.4	-10.5	10.4	4.0	1.3
03175: Haberdashery and knitting wool	0.0	1.5	1.0	0.5	0.1	65.3	8.8	2.6	9.2	-8.9	25.4	5.2	1.4
03183: Clothing accessories	0.1	18.3	8.9	9.4	10.4	45.9	36.0	-2.4	33.6	-32.6	39.2	23.0	4.3
03190: Garment alterations	0.0	3.5	2.5	1.0	0.1	72.1	16.3	5.9	15.5	-17.2	69.3	9.3	1.6
03198: Dry cleaning	0.1	5.1	4.0	1.1	0.1	78.9	10.4	4.6	9.4	-13.1	40.2	5.4	1.5
03212: Women's footwear	0.4	21.1	10.2	11.0	13.9	45.2	31.3	-3.6	27.7	-28.5	36.1	19.7	3.3
03220: Men's footwear	0.2	18.8	9.1	9.7	11.5	45.8	28.4	-2.8	26.0	-26.0	33.8	18.2	2.9
03228: Children's footwear	0.1	22.0	10.5	11.5	14.7	44.7	32.9	-3.5	30.2	-29.5	35.6	18.8	2.4
03237: Shoe repairs	0.0	6.1	5.5	0.6	0.0	89.9	8.3	6.3	8.0	-8.6	26.2	3.4	1.6
03310: Winter sportswear	0.1	24.2	11.9	12.3	11.4	41.4	29.1	-6.4	24.9	-26.4	37.1	19.8	3.4
03320: Summer/year-round sportswear	0.1	19.0	9.2	9.8	9.6	44.8	28.1	-3.8	26.5	-27.0	34.7	17.5	2.3
04010: Dwelling repair products	0.1	6.3	3.8	2.6	2.0	57.7	17.7	0.4	15.8	-20.1	31.2	9.4	1.6
04020: House maintenance services	1.4	31.8	21.8	10.0	0.0	65.7	5.2	1.1	4.8	-5.8		4.5	5.6
04025: Plumbing services	0.3	27.9	21.3	6.6	0.0	73.8	3.0	1.8	3.5	-3.1		3.3	9.0
04026: Electric installation services	0.1	30.9	23.9	6.9	0.0	84.2	3.1	1.8	3.0	-4.7		3.5	8.7
04027: Painting and plastering services	0.1	30.9	20.3	10.6	0.0	65.4	2.9	1.1	3.2	-2.9		2.4	7.6
04029: Carpentry services	0.4	35.1	26.1	9.0	0.0	77.0	3.4	2.2	3.6	-3.6		2.5	5.3
04030: Charges for household waste elimination	0.2	28.7	22.5	6.2	0.0	65.0	5.6	0.8	5.7	-6.8		4.4	3.8
04036: Charges for water provision	0.3	41.0	39.1	1.9	0.0	85.9	11.5	7.5	11.7	-15.0		10.9	5.3

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
04042: Charges for sewerage	0.2	42.4	34.7	7.7	0.0	69.6	9.8	3.3	11.0	-15.2		9.9	8.2
04047: Maintenance and care-taking	1.1	23.4	9.6	13.8	0.0	55.8	6.2	3.1	8.3	-4.8		5.4	4.8
04053: Gas, consumer type II	0.2	7.6	1.3	6.3	0.0	14.0	12.1	-8.0	13.7	-11.4		6.8	1.9
04055: Gas, consumer type III	0.1	7.9	1.1	6.7	0.0	12.7	12.2	-8.6	13.1	-11.7		6.6	1.8
04057: Gas, consumer type IV	0.2	7.7	1.3	6.3	0.0	15.6	13.0	-8.6	12.8	-12.5		7.2	1.9
04059: Gas, consumer type V	0.1	7.7	1.4	6.2	0.0	15.7	13.8	-8.9	14.4	-13.0		7.6	1.9
04071: Electricity, consumer type I	0.3	4.9	2.6	2.2	0.0	49.8	11.1	1.6	8.5	-8.8		5.5	4.0
04073: Electricity, consumer type II	0.4	5.1	2.6	2.5	0.0	48.4	12.0	1.1	9.5	-13.1		7.1	5.8
04075: Electricity, consumer type III	0.1	5.1	2.5	2.5	0.0	48.4	12.5	1.9	9.7	-12.6		6.7	4.7
04077: Electricity, consumer type IV	0.3	5.1	2.6	2.5	0.0	48.5	12.8	1.1	9.4	-12.6		7.6	4.7
04079: Electricity, consumer type V	0.3	5.1	2.7	2.4	0.0	48.7	13.1	1.1	9.6	-13.3		7.4	4.1
04081: Electricity, consumer type VI	0.3	5.0	2.6	2.4	0.0	48.7	13.9	2.0	10.9	-15.3		7.6	4.4
04083: Electricity, consumer type VII	0.3	5.3	2.7	2.6	0.0	48.5	13.3	1.8	10.1	-13.2		7.9	4.1
04090: Heating oil	1.1	98.1	50.8	47.3	0.0	51.8	4.9	-0.1	3.8	-4.0	6.2	2.1	3.6
04100: District heating	0.1	4.5	3.1	1.4	0.0	63.9	9.7	3.3	10.3	-10.0		5.8	1.4
04110: Wood pellets	0.1	50.4	30.4	20.0	0.3	61.9	3.7	0.4	3.2	-3.9	12.5	2.1	2.2
04112: Wood logs	0.1	16.4	10.0	6.3	3.6	60.1	13.0	1.3	12.1	-13.9	30.3	5.2	1.5
05003: Living room and home office furniture	0.5	21.2	10.7	10.4	16.0	49.9	22.1	-0.9	21.0	-22.3	24.5	13.6	3.4
05020: Bedroom furniture	0.4	21.2	10.9	10.3	16.6	50.9	20.2	-0.6	19.5	-20.9	22.1	12.7	3.6
05031: Kitchen and dining room furniture	0.1	25.4	13.1	12.3	20.7	51.6	21.0	0.2	20.6	-21.8	23.9	15.7	5.0
05040: Garden furniture	0.2	14.8	7.4	7.5	16.7	50.4	26.9	-0.7	25.5	-27.0	30.4	15.2	2.3

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
05050: Furnishings	0.2	12.1	6.3	5.8	9.6	50.5	25.5	-1.7	23.3	-26.0	32.0	15.4	2.4
05055: Light fittings	0.1	19.3	9.6	9.7	16.1	49.5	22.7	-0.8	22.1	-22.7	25.9	15.3	3.6
05060: Carpets and floor coverings	0.1	6.7	3.9	2.9	5.0	56.5	19.6	0.5	17.8	-21.8	29.1	10.0	2.1
05071: Bed linen and accessories	0.2	10.3	5.3	5.0	7.3	51.7	24.6	-0.2	23.7	-25.6	28.9	13.4	2.0
05085: Household linen	0.1	11.0	5.8	5.1	6.4	53.1	23.5	0.7	22.1	-23.3	28.6	15.6	1.9
05090: Curtains and curtain accessories	0.1	8.3	4.6	3.8	4.9	57.3	21.5	0.9	20.6	-24.3	30.0	11.3	1.6
05101: Major household appliances	0.4	10.0	5.4	4.5	6.4	51.4	14.4	0.2	14.8	-14.7	27.0	11.1	2.3
05109: Refrigerators and freezers	0.1	21.2	10.5	10.7	4.7	48.1	10.0	-0.3	10.4	-10.0	22.5	10.5	4.0
05110: Washing machines, dryers and dishwashers	0.1	21.4	10.4	11.0	4.8	46.3	9.8	-0.2	10.7	-9.3	22.1	10.9	4.6
05111: Cookers, ovens and barbecues	0.1	18.7	9.6	9.1	5.3	49.2	9.5	-0.4	9.6	-9.9	24.0	9.5	3.2
05115: Air conditioning units	0.1	24.4	10.8	13.6	10.0	44.3	16.5	-1.8	16.5	-15.9	28.0	14.6	3.1
05117: Cleaning devices	0.1	28.3	13.8	14.6	9.5	48.6	12.6	-0.5	12.0	-12.6	22.9	11.3	3.7
05120: Smaller electric household appliances	0.2	15.0	7.4	7.6	9.6	49.5	20.7	-0.2	20.0	-20.0	31.5	15.7	2.6
05141: Kitchen utensils	0.1	8.2	4.4	3.8	5.1	53.7	17.1	0.1	16.0	-17.9	28.5	12.6	1.8
05150: Glassware and tableware	0.1	7.6	4.2	3.5	4.4	55.8	22.1	0.8	19.9	-23.3	32.0	13.3	1.8
05165: Cutlery	0.0	6.2	3.6	2.7	3.0	56.7	18.9	0.7	17.3	-21.4	28.9	12.2	1.8
05170: Other household equipment	0.1	8.0	4.2	3.7	1.7	54.2	14.5	0.7	13.6	-14.4	27.5	11.5	1.9
05181: Motorized tools for DIY and garden	0.1	7.8	3.8	4.0	6.1	49.0	15.9	-1.2	15.1	-16.9	27.0	10.4	1.6
05201: Non-motorized tools for house and garden	0.1	4.6	2.8	1.8	1.1	60.1	11.6	0.3	10.1	-14.2	30.1	8.4	2.0
05210: Equipment and other accessories for house and garden	0.3	5.4	3.1	2.3	1.5	55.7	13.6	0.4	12.2	-14.0	28.9	8.8	1.8

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
05222: Detergents and cleaning products	0.3	17.4	9.1	8.3	1.3	52.1	10.1	0.2	9.8	-10.3	30.5	11.0	2.8
05250: Cleaning articles	0.0	13.5	6.9	6.6	0.7	50.4	4.5	0.0	5.0	-4.8	20.6	5.6	2.1
05260: Household articles	0.2	12.3	6.6	5.7	1.0	53.5	8.6	0.6	8.4	-8.4	22.4	8.1	2.3
05280: Household cleaning services	0.3	10.0	8.4	1.6	0.0	80.4	8.4	4.0	7.7	-8.4		4.9	3.0
06016: Therapeutic devices	0.5	10.6	6.4	4.2	1.2	55.3	11.0	0.1	10.1	-11.5	14.5	7.6	2.7
06017: Glasses and contact lenses	0.4	5.9	2.8	3.1	3.8	48.7	10.4	0.5	9.6	-10.6	29.5	9.3	2.3
06018: Hearing aids and other therapeutic devices	0.2	8.8	4.9	3.9	3.5	54.7	11.3	0.5	10.9	-11.5	17.1	9.3	3.3
06035: Out-patient medical services in hospitals	1.8	5.6	3.5	2.2	0.0	58.1	0.6	0.1	0.6	-0.6		0.6	1.0
06036: Dental services	1.3	9.8	9.4	0.4	0.0	88.6	3.9	3.0	3.9	-4.1		1.1	2.5
06053: Laboratory analyses	0.8	0.0	0.0	0.0	0.0								
06062: Physiotherapy	0.6	0.0	0.0	0.0	0.0								
06063: Home care Spitex	0.7	0.3	0.3	0.0	0.0	100.0	3.2	3.2	3.2				
06070: Medical products	0.1	13.6	7.1	6.5	1.4	51.9	7.0	-0.2	6.6	-7.5	25.0	7.0	2.4
07003: New cars	2.7	25.6	14.0	11.6	2.4	57.0	3.4	0.0	3.1	-3.7	3.0	1.8	3.2
07062: Motorcycles	0.2	10.3	6.6	3.7	2.2	63.7	6.8	0.2	5.7	-8.0	10.9	4.0	3.1
07071: Bicycles and electric bicycles	0.2	9.3	4.5	4.8	3.8	50.8	14.6	0.0	13.7	-14.3	22.9	9.5	2.6
07075: Bicycles	0.1	22.8	12.3	10.5	9.7	54.2	15.4	-0.0	14.6	-16.2	25.5	12.5	4.6
07083: Spare parts	0.1	15.8	11.6	4.2	0.0	70.1	5.7	0.9	4.8	-7.6		4.6	4.5
07085: Electric bicycles	0.2	28.0	14.8	13.2	12.1	53.0	12.4	-0.6	11.8	-13.1	19.7	10.5	3.3
07094: Vehicle accessories	0.1	6.6	4.2	2.3	2.6	64.3	11.6	1.3	10.8	-13.3	29.8	8.5	2.9
07096: Tyres	0.2	15.5	8.3	7.2	1.8	54.0	7.3	-0.0	6.5	-7.9	13.6	5.5	3.8
07110: Petrol	1.7	84.4	43.3	41.1	0.2	49.7	2.5	0.0	2.1	-2.1	4.4	0.9	6.1
07111: Diesel	0.6	82.2	40.4	41.7	0.1	47.7	2.3	-0.1	1.9	-2.0	3.9	0.9	8.5
07113: Service and repairs of motorised vehicles	1.1	28.4	26.3	2.1	0.0	83.9	2.7	1.3	2.4	-3.2		1.8	8.8

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
07128: Bicycle maintenance	0.1	3.3	2.7	0.6	0.3	84.4	14.5	8.3	13.8	-16.0	24.8	8.0	1.6
07131: Parking fees	0.1	2.8	2.2	0.6	0.1	68.7	25.8	5.1	22.2	-32.9		16.5	2.4
07137: Rent of permanent parking spaces	0.1	1.4	1.2	0.2	0.0	77.4	6.7	0.9	5.6	-9.4		3.5	2.5
07140: Taxes for private vehicles and driving school	0.1	5.8	2.4	3.4	5.7	48.7	15.0	-2.6	12.1	-17.5	20.4	6.2	1.5
07226: Public transport abroad	0.0	66.8	34.8	32.0	6.6	52.1	22.0	0.9	21.4	-22.0	19.7	18.8	3.9
07320: Taxi	0.1	9.0	7.7	1.3	0.0	80.8	7.3	5.2	7.5	-4.5		3.1	1.8
07500: Passenger transport by ship	0.0	100.0	27.8	72.2	0.0	27.8	2.5	-1.2	2.4	-2.6			
08006: Telecommunication equipment	0.2	35.9	15.0	20.9	5.5	42.9	10.5	-0.4	11.7	-9.3	18.0	9.3	3.7
08016: Landline telephony	0.9	32.0	23.4	8.6	0.0	73.0	0.7	0.5	0.8	-0.2			
08018: Mobile communication	1.3	6.5	3.7	2.8	0.0	47.7	11.2	-1.8	10.5	-12.7		6.6	2.1
08020: Internet	0.5	10.7	2.5	8.2	0.0	23.5	4.6	-4.4	0.3	-5.9			
08022: Landline telephony, small service package	0.0	4.9	3.4	1.6	0.0	75.5	6.1	-0.8	3.5	-14.0		1.0	4.2
08024: Landline telephony, medium service package	0.0	5.0	1.9	3.1	0.0	55.7	15.0	-4.4	9.5	-21.9		3.1	4.1
08026: Landline telephony, large service package	0.0	5.2	1.7	3.5	0.0	50.3	23.2	-7.8	14.5	-30.0		3.0	3.0
08034: Bundled products landline Internet	0.5	2.2	1.7	0.5	0.0	55.8	11.3	-5.8	4.9	-19.3		0.0	
08036: Mobile network communication, small service bundle	0.3	3.7	2.7	1.0	0.0	73.5	11.2	2.2	9.4	-16.4		4.8	1.5
08038: Mobile network communication, medium service bundle	0.3	6.9	5.7	1.3	0.0	79.9	7.5	5.5	8.9	-3.9		5.2	2.1
08040: Mobile network communication, large service bundle	0.3	7.0	5.7	1.3	0.0	75.6	8.1	2.9	7.7	-8.0		4.1	3.2
08042: Fixed-line communication	0.7	3.4	2.1	1.3	0.0	61.1	12.2	-2.1	8.1	-18.2		3.0	1.6

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
08045: Combined offers for fixed-line and mobile communication	1.2	4.0	2.8	1.2	0.0	64.3	8.9	1.4	8.4	-10.4		2.9	1.8
08046: 3-in-1 combo offer	0.5	2.3	1.3	1.0	0.0	43.3	8.7	1.8	11.5	-6.0		4.1	1.7
08048: 4-in-1 combo offer	0.5	3.7	2.4	1.3	0.0	43.6	8.8	-1.4	9.7	-11.1		15.2	3.8
09003: Television sets	0.2	27.0	10.4	16.6	7.2	37.1	14.7	-3.1	15.3	-14.1	21.0	11.4	4.0
09013: Audiovisual appliances	0.1	22.2	10.1	12.1	4.3	44.2	13.7	-1.5	13.6	-13.2	24.2	10.6	3.3
09029: Photographic, cinematographic equipment and optical instruments	0.1	29.4	12.5	17.0	7.4	40.3	11.0	-1.8	11.7	-10.2	16.1	8.2	3.7
09048: Personal computers	0.3	44.0	18.6	25.4	3.1	41.9	7.8	-1.5	7.8	-8.1	17.1	7.9	4.1
09055: IT peripheral devices and accessories	0.2	43.5	21.9	21.6	2.5	50.6	7.4	0.2	7.4	-7.0	19.8	6.9	3.7
09064: Computer software	0.0	34.5	16.4	18.1	2.1	48.1	9.2	-0.7	8.6	-9.4	26.7	8.9	3.1
09085: Storage devices and contents	0.2	27.4	12.7	14.7	1.7	46.0	10.2	-1.5	9.4	-10.0	26.9	8.5	2.1
09090: Downloads	0.0	40.1	17.9	22.2	0.0	44.8	2.8	-0.1	3.2	-3.0		3.0	1.3
09093: Unused data carriers	0.0	31.3	15.7	15.7	4.3	50.3	13.5	0.3	13.3	-13.9	33.2	12.8	2.9
09120: Radio and TV repair and installation	0.0	5.7	3.8	1.8	0.0	70.9	13.5	4.5	13.2	-16.0		9.2	1.7
09200: Musical instruments	0.1	26.0	13.5	12.5	1.9	54.9	6.1	0.0	5.7	-6.9	12.7	4.9	3.1
09211: Games, toys and hobbies	0.4	12.5	5.7	6.8	1.5	48.5	15.1	-1.8	14.0	-16.4	34.4	11.1	2.2
09216: Game consoles and electronic games	0.0	76.4	34.1	42.2	2.7	45.7	9.8	-0.3	9.4	-8.5	12.1	6.6	2.1
09217: Parlour games	0.0	10.1	5.3	4.8	1.5	52.2	11.7	-0.5	10.4	-12.2	18.9	8.8	3.2
09218: Toys	0.3	9.4	4.8	4.6	3.2	51.1	14.2	-0.2	13.5	-14.6	24.2	10.8	2.6
09231: Winter sports equipment	0.2	16.9	8.0	8.9	17.8	45.0	21.6	-1.9	20.6	-19.0	26.4	13.2	2.5
09245: Services for winter sports equipment	0.0	3.3	1.9	1.4	0.9	55.8	12.7	2.0	12.3	-12.4	16.0	5.7	1.3
09250: Summer/year-round sports articles	0.2	8.0	3.9	4.1	6.8	48.2	19.5	-1.6	18.4	-19.7	28.2	12.8	2.4

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
09252: Camping and outdoor articles	0.1	11.7	5.9	5.8	8.6	48.5	20.5	-1.3	20.5	-21.0	27.3	13.1	2.0
09300: Plants, flowers and garden products	0.5	8.0	4.2	3.8	4.3	53.0	19.4	0.3	18.9	-20.5	29.4	14.5	3.7
09304: Garden products	0.1	6.2	3.9	2.3	1.2	59.6	12.9	2.1	12.7	-14.0	28.4	10.2	1.5
09305: Plants and flowers	0.4	11.9	6.5	5.4	4.2	54.9	18.0	1.2	17.6	-18.5	31.3	12.9	2.1
09320: Pet related products	0.3	23.3	12.3	11.0	1.4	53.1	6.6	0.1	6.2	-6.9	22.1	6.8	5.6
09340: Veterinary services for pets	0.2	12.5	11.9	0.6	0.0	94.2	4.9	3.6	4.6	-8.9		3.6	2.7
09352: Sporting events	0.0	21.7	13.0	8.6	0.3	62.8	18.5	2.4	16.4	-21.5	22.5	10.0	3.0
09400: Admission to sport facilities	0.7	7.1	6.3	0.8	0.2	86.8	11.5	7.4	11.0	-16.1		4.4	2.6
09420: Mountain railways, ski lifts	0.2	30.9	23.8	7.1	0.0	79.7	9.1	2.1	7.4	-14.6		6.7	4.6
09436: Cinema	0.1	4.2	3.5	0.7	0.0	80.7	8.0	3.8	7.3	-10.7	26.2	3.9	2.6
09450: Theatre and concerts	0.3	9.2	6.3	2.8	0.0	73.3	9.2	2.8	8.2	-12.1		6.9	3.8
09463: Museums and zoos	0.1	16.5	13.8	2.8	0.2	84.7	15.8	11.7	16.6	-13.4	25.5	5.3	1.9
09469: Reception of paid audio-visual content	0.2	3.0	2.0	1.0	0.2	66.5	19.9	6.8	20.5	-18.6	86.9	13.4	1.3
09475: Photographic services	0.1	11.4	6.0	5.4	7.2	54.9	23.9	1.6	22.7	-24.0	24.3	7.4	2.4
09490: Leisure-time courses	0.7	15.7	10.9	4.8	0.1	71.0	20.1	3.1	17.7	-31.4	22.3	22.2	7.1
09526: Daily and periodical purchased individually	0.1	11.2	9.1	2.1	0.0	83.0	8.3	5.5	8.4	-9.1		4.6	2.5
09535: Daily and periodical subscriptions	0.4	17.0	14.3	2.7	0.7	81.5	6.0	2.8	5.5	-8.7	19.6	3.8	2.8
09545: Other printed matter	0.1	4.5	2.7	1.7	2.5	58.7	15.9	-0.3	13.0	-16.8	59.0	11.4	2.1
09555: Writing and drawing materials	0.1	8.5	5.5	3.0	1.2	60.0	7.1	1.2	7.0	-7.5	24.0	7.8	3.7
09570: International package holidays	2.2	43.4	22.5	20.9	0.3	55.3	12.9	0.3	12.3	-13.6	18.7	10.5	4.9
10041: Compulsory education	0.2	20.4	20.0	0.3	0.0	98.6	4.0	3.9	4.0	-1.9		2.3	5.9

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
10060: Post-compulsory education	0.1	18.9	17.6	1.3	0.0	91.7	4.4	3.9	4.6	-2.4		4.1	4.0
10070: Higher vocational education and universities	0.4	8.0	7.0	1.0	0.0	89.8	17.7	15.8	19.4	-8.7		26.0	3.9
10100: Life-long learning	0.1	8.5	6.5	2.0	0.1	73.3	19.8	4.8	17.4	-26.4	48.5	19.4	4.7
11003: Meals taken in restaurants and cafes	3.3	3.6	2.6	1.0	0.0	72.0	8.0	2.6	7.4	-9.3	32.9	4.6	1.8
11052: Wine	0.6	3.7	2.7	1.0	0.0	70.7	9.7	1.7	8.1	-13.9	26.2	6.3	1.5
11070: Beer	0.3	2.4	2.1	0.3	0.0	83.2	7.5	4.2	7.0	-9.5	31.6	4.3	1.5
11075: Spirits, other alcoholic drinks	0.1	1.5	1.2	0.3	0.0	79.6	10.1	5.1	9.6	-12.0		5.4	1.4
11091: Coffee and tea	0.5	2.6	2.3	0.3	0.0	82.5	5.8	3.4	5.6	-7.5	7.7	3.3	1.6
11103: Mineral water and soft drinks	0.5	2.2	1.9	0.3	0.0	83.0	7.6	3.9	6.9	-10.2		4.4	1.6
11110: Self-service restaurants	0.4	8.1	6.6	1.5	0.0	77.1	6.8	2.9	6.5	-8.0		3.9	2.4
11120: Other non-alcoholic beverages	0.0	2.2	1.7	0.5	0.0	74.6	8.0	2.8	7.3	-10.2		3.7	1.7
11130: Fast food meals	1.1	3.1	2.3	0.8	0.7	71.5	11.4	2.8	9.9	-14.1	29.1	5.8	1.7
11140: Fast food non-alcoholic beverages	0.1	2.1	1.8	0.3	0.0	80.0	9.2	4.8	8.7	-11.7		4.1	1.6
11145: Fast food alcoholic beverages	0.0	1.4	1.1	0.3	0.0	75.3	12.3	4.2	10.9	-16.5	22.3	4.6	1.1
11151: Meals in canteens	0.5	4.4	3.6	0.7	0.0	80.9	8.7	5.2	8.6	-8.9		4.6	2.6
11160: Beverages in canteens	0.1	3.1	2.3	0.8	0.0	70.7	13.9	3.6	12.0	-18.5		10.2	2.0
11171: Hotels	1.1	48.9	24.6	24.3	0.0	48.9	16.1	-0.5	14.9	-15.4	26.7	11.8	4.2
11190: Supplementary accommodation	0.4	47.0	25.0	22.0	2.5	53.3	12.5	0.4	10.6	-11.8	18.2	7.9	6.8
12002: Men's and children's hairdressers	0.1	4.0	3.4	0.6	0.0	78.6	6.9	2.4	5.8	-9.9		3.6	1.5
12003: Hairdresser and beauty salon services	0.9	6.5	5.9	0.6	0.1	89.2	6.5	4.2	6.0	-9.3	19.1	4.3	2.3

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f^-}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
12004: Women's hairdressers	0.4	5.4	4.9	0.5	0.0	88.5	4.8	3.1	4.4	-7.6		3.6	2.0
12010: Cosmetic treatment	0.3	5.1	4.4	0.7	0.1	83.1	9.2	4.7	8.5	-12.8	22.0	4.5	1.4
12023: Soaps and foam baths	0.1	14.5	7.6	6.8	1.7	53.1	9.9	0.3	9.6	-10.3	24.8	9.6	4.0
12040: Hair-care products	0.1	16.9	8.7	8.2	2.7	51.5	9.5	0.1	9.2	-9.7	25.5	9.9	4.1
12055: Dental-care products	0.1	16.9	9.0	7.9	3.0	53.3	8.0	0.3	7.8	-8.7	22.1	8.4	4.2
12070: Beauty products and cosmetics	0.6	13.3	7.0	6.4	1.9	53.4	9.3	0.4	9.2	-9.7	25.7	9.3	3.3
12085: Products for personal care	0.2	22.9	11.8	11.0	4.7	51.5	10.4	0.1	10.1	-10.8	22.5	10.6	4.9
12088: Products for face care and make-up	0.2	22.7	11.6	11.1	3.4	51.2	10.8	-0.0	10.4	-10.8	23.0	10.5	4.9
12100: Paper articles for personal hygiene	0.2	18.9	9.6	9.3	2.1	51.6	9.8	0.2	9.6	-9.7	29.8	10.3	3.2
12129: Personal care appliances	0.1	7.9	3.9	3.9	3.0	50.6	12.4	0.1	12.9	-12.7	29.5	9.9	1.7
12130: Non-electrical appliances for personal care	0.1	18.7	9.7	9.1	1.1	50.7	4.7	-0.0	4.7	-4.9	19.2	5.3	3.2
12140: Jewellery	0.2	11.6	6.5	5.1	5.0	53.6	30.1	0.6	28.9	-31.9	50.4	22.4	1.4
12150: Electrical appliances for personal care	0.1	27.6	13.3	14.2	8.1	47.7	13.8	-0.7	13.8	-13.8	25.2	12.2	3.3
12161: Watches	0.3	2.7	1.7	1.0	0.5	55.8	15.1	1.2	14.2	-16.4	38.9	7.2	2.9
12170: Luggage, bags and accessories	0.3	8.1	4.4	3.7	4.0	54.5	17.5	0.2	16.3	-18.6	32.3	11.9	1.9
12190: Social protection services	0.7	12.7	10.5	2.1	0.0	78.7	7.7	2.7	6.5	-10.6		7.7	1.7
12501: Household insurance (including private third-party insurance)	0.4	3.1	2.1	1.0	0.0	64.8	4.3	0.3	3.5	-5.5		3.7	3.5
12520: Car insurance	0.5	5.4	4.3	1.1	0.0	79.2	4.0	2.5	3.9	-3.6		2.1	2.3
12531: Financial services	0.3	41.7	19.8	21.9	0.0	47.3	4.6	1.6	7.2	-2.9		5.9	3.3
12534: Bank account fees	0.2	4.8	3.0	1.8	0.0	62.8	18.7	-6.0	9.8	-30.5		13.8	1.4
12536: Fees for securities accounts	0.3	22.4	17.6	4.8	0.0	66.0	4.1	1.5	4.3	-4.3		4.1	2.1

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Table B.13. Price-setting moments by expenditure item (continued)

	Weight	f	f^+	f^-	f^s	$\frac{f^+}{f}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	Kur(z)
12541: Other Services	0.3	6.3	4.2	2.1	0.0	60.2	14.0	3.7	14.3	-10.9		7.3	4.5
12543: Official documents	0.1	2.0	1.2	0.8	0.0	68.3	11.6	6.5	12.5	-7.7		16.1	1.0
12547: Services of lawyers	0.1	71.6	71.6	0.0	0.0	100.0	2.1	2.1	2.1				
12549: Advertisements	0.1	10.0	7.5	2.4	0.0	68.1	21.4	6.9	26.2	-19.8		11.3	2.0

Notes: Average price-setting moments by expenditure item for the Swiss CPI microdata sample from January 2008 to December 2025, including price changes due to temporary sales and product substitutions. Expenditure items correspond to the COICOP five-digit subclasses. The frequency measures are weighted averages of variety-level shares of price changes, increases, decreases, and sales-related price changes, respectively. “Share of increases” is the share of price increases in all non-zero price changes. The size measures are weighted averages of the mean log price change (“Average”), the mean absolute log price change (“Absolute”), the mean size of price increases and decreases, the mean absolute size of sales-related price changes, the standard deviation of absolute log price changes, and the kurtosis of standardized price changes. “Weight” is the average CPI expenditure weight over the sample period, in percent. All moments are first computed at the variety level and then aggregated as a weighted mean across varieties using CPI expenditure weights. Values are reported in percent per month.

B.7 Regional heterogeneity in price-setting moments

[Table B.14](#) summarizes average price-setting moments for the seven NUTS-2 regions of Switzerland.

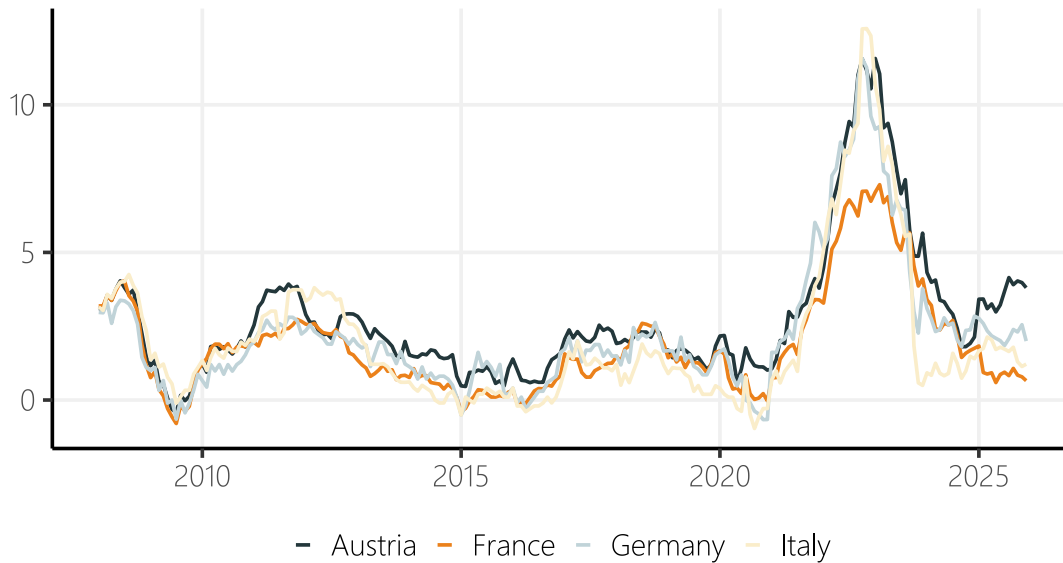
Table B.14. Regional price-setting moments

	Weight	Frequency of price adjustments					Size of price adjustments						
		Changes	Increases	Decreases	Sales	Share of Increases	Absolute Changes	Average Changes	Increases	Decreases	Sales	Std. dev.	Kurtosis
		f	f^+	f^-	f^s	$\frac{f^+}{f}$	$ \Delta p $	Δp	Δp^+	Δp^-	$ \Delta p^s $	$sd(\Delta p)$	$Kur(z)$
Berne	37.7	22.8	12.1	10.8	3.3	53.7	12.1	0.1	11.2	-12.3	29.6	6.2	1.9
Bâle	36.8	21.7	11.5	10.2	2.3	54.6	10.4	0.4	9.5	-10.3	27.7	5.3	2.1
Coire	31.3	17.6	9.5	8.0	2.2	55.9	12.5	0.5	11.4	-13.2	31.0	4.8	1.7
Genève	36.0	25.4	13.4	12.0	4.0	54.4	11.2	0.3	10.2	-11.3	26.6	5.2	1.9
Lausanne	34.9	23.3	12.2	11.1	2.5	53.5	10.1	0.3	9.5	-10.0	29.2	5.1	1.8
Lucerne	31.4	22.5	11.9	10.6	2.3	53.6	10.1	0.2	9.5	-10.3	30.0	4.9	1.7
Lugano	30.7	24.8	13.0	11.8	2.3	52.4	9.9	0.1	9.4	-9.9	29.9	5.6	1.6
Neuchâtel	30.8	23.4	12.5	10.9	1.6	54.5	8.9	0.4	8.4	-9.1	29.5	4.7	1.5
Sion	32.1	23.9	12.5	11.4	2.2	53.0	9.9	0.3	9.3	-9.8	30.4	4.6	1.5
St-Gall	35.9	23.0	12.3	10.8	2.2	54.5	9.9	0.4	9.3	-10.1	27.2	5.5	1.8
Zurich	37.4	22.2	11.8	10.4	2.1	54.9	10.6	0.4	9.8	-10.6	27.8	5.8	2.0

Notes: Average price-setting moments by price-collection region for the Swiss CPI microdata sample from January 2008 to December 2025, including price changes due to temporary sales and product substitutions. The frequency measures are weighted averages of variety-level shares of price changes, increases, decreases, and sales-related price changes, respectively. “Share of increases” is the share of price increases in all non-zero price changes. The size measures are weighted averages of the mean log price change (“Average”), the mean absolute log price change (“Absolute”), the mean size of price increases and decreases, the mean absolute size of sales-related price changes, the standard deviation of absolute log price changes, and the kurtosis of standardized price changes. “Weight” is the average CPI expenditure weight over the sample period, in percent. All moments are first computed at the variety level and then aggregated as a weighted mean across varieties using CPI expenditure weights. Values are reported in percent per month.

In order to investigate whether regional heterogeneity in cross-border economic linkages shapes price-setting behavior within Switzerland, we construct a continuous measure of each region's exposure to inflation developments in neighboring countries. Inflation in France, Germany, Italy, and Austria often evolves quite differently over time, and such variation can plausibly generate spatially heterogeneous inflationary environments for Swiss firms. [Figure B.2](#) shows the monthly HICP inflation rates of the four neighboring countries over the period 2008–2025. Average inflation rates over this period amount to 1.86% in France, 2.24% in Germany, 2.01% in Italy, and 2.76% in Austria.

Figure B.2. Monthly HICP inflation rates in neighboring countries, 2008–2025



Notes: Monthly HICP inflation rates for France, Germany, Italy, and Austria from January 2008 to December 2025. All series are sourced from Eurostat. Values are reported in percent per month.

To quantify these differences, we begin by computing for each Swiss region the shortest driving distance to the nearest border town in each neighboring country. This measure captures economically relevant proximity because it reflects the ease with which consumers and firms can interact across borders, engage in cross-border shopping, and respond to foreign competitive conditions. [Table B.15](#) shows the resulting distance matrix, measured in kilometers.

Table B.15. Driving distance from Swiss regions to neighboring countries

Region	France	Germany	Italy	Austria
Berne	105	102	208	240
Bâle	4	18	289	206
Coire	210	202	168	57
Genève	10	255	132	395
Lausanne	50	204	146	345
Lucerne	104	101	191	181
Lugano	271	284	25	234
Neuchâtel	53	132	214	273
Sion	158	252	103	392
St-Gall	174	46	270	38
Zurich	98	37	228	122

Notes: Distance matrix $d_{r,c}$ used to construct region-specific neighbor weights $w_{r,c}$. For each Swiss region r and neighboring country $c \in \{\text{France, Germany, Italy, Austria}\}$, $d_{r,c}$ is the shortest driving distance (in kilometers) from the center of region r to the nearest town across the Swiss border in country c .

Using these distances, we assign to each Swiss region r and neighboring country c a weight

$$w_{r,c} = \frac{d_{r,c}^{-1}}{\sum_j d_{r,j}^{-1}}, \quad (15)$$

so that nearer countries receive greater influence. Combining these weights with monthly country-specific HICP inflation rates $\pi_{c,t}$ yields a time-varying exposure index,

$$\text{Exposure}_{r,t} = \sum_c w_{r,c} \pi_{c,t}, \quad (16)$$

which captures the foreign inflationary environment confronting each Swiss region at each point in time.

To examine whether differences in proximity to foreign inflation translate into systematic differences in firms' pricing behavior, we construct monthly regional moments of price adjustment from the micro price dataset: the overall frequency of price changes, the frequencies of price increases and of price decreases, and the corresponding measures that exclude sales. These regional moments serve as dependent variables in a panel regression of the form

$$y_{r,t} = \alpha_r + \delta_t + \beta \text{Exposure}_{r,t} + \gamma' X_{r,t} + \varepsilon_{r,t}, \quad (17)$$

where region fixed effects absorb all persistent regional characteristics, time fixed effects control for common macroeconomic shocks, and identification derives from the interaction of time-varying foreign inflation with fixed differences in regional proximity to each neighbor.

The estimates in [Table B.16](#) reveal a clear and economically meaningful relationship between foreign inflation exposure and domestic price-setting behavior. The coefficient on the exposure index is positive and highly significant for the overall frequency of price changes. A coefficient of approximately 0.7 implies that when the weighted inflation exposure rises by one percentage point, the monthly frequency of price adjustments in the corresponding Swiss region increases by roughly 0.7 percentage points. The increase in frequency is driven primarily by upward price revisions. By contrast, the estimated effects on the size of individual price changes, both overall and separately for increases and decreases, are not statistically significant. This finding indicates that firms located in regions more strongly affected by inflation in nearby foreign markets adjust their prices more frequently. Since region and time fixed effects absorb, respectively, stable cross-regional differences and Switzerland-wide inflationary shocks, the estimated response reflects a genuine behavioral adjustment to the specific pattern of inflation developments across borders.

Table B.16. Effect of foreign inflation exposure on regional price-setting behavior

	Dependent variable					
	f	f^+	f^-	$ \Delta p $	Δp^+	Δp^-
Exposure	0.701*** (0.158)	0.468*** (0.123)	0.233** (0.109)	-0.009 (0.113)	-0.064 (0.139)	0.043 (0.161)
Observations	2,376	2,376	2,376	2,376	2,376	2,376
R ²	0.627	0.877	0.875	0.396	0.528	0.562
Adjusted R ²	0.588	0.864	0.862	0.332	0.478	0.515
F Statistic (df = 216; 2149)	16.736***	70.788***	69.702***	6.523***	11.117***	12.744***

Notes: Panel OLS estimates of the effect of foreign inflation exposure on regional price-setting moments. The dependent variables are the regional monthly frequency of price changes (f), frequency of price increases (f^+), frequency of price decreases (f^-), absolute size of price changes ($|\Delta p|$), size of price increases (Δp^+), and absolute size of price decreases ($|\Delta p^-|$). The exposure variable is the inverse-distance-weighted average of monthly HICP inflation rates in France, Germany, Italy, and Austria, with weights proportional to the inverse of the driving distance from each Swiss region's center to the nearest border crossing of the respective neighbor country (see [Table B.15](#)). All specifications include region and time fixed effects. Standard errors (in parentheses) are clustered at the region level. Statistical significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

C. TIME-SERIES PRICE-SETTING BEHAVIOR

This appendix refers to [Section 3.3](#) and presents additional figures and tables on the time-series evolution of price-setting behavior, including evidence on seasonality, robustness of trends, and the analysis of price setting before and during the pandemic.

C.1 Cross-sectional distributions of additional price-setting moments over time

The temporal evolution of both the frequency and the size of price changes is illustrated in [Figure 1](#) of the main text. To further examine how these dimensions evolve over time, [Figure C.1](#) reports the cross-sectional distributions of additional price-setting moments. In particular, the top row shows the frequencies of price increases and decreases, the middle row displays the corresponding sizes, and the bottom row presents the frequency and size of sales-related price changes.

Notably, the trend in the frequency of price changes reflects equal contributions from both price increases and decreases. By contrast, the size of price changes shows no significant trend, with the sizes of both increases and decreases remaining relatively stable over time.

C.2 Seasonality in price setting

Using variety-level monthly frequencies and sizes of price adjustments over time, we study seasonal patterns in price setting in Switzerland. To this end, we follow [Gautier et al. \(2024\)](#) and estimate weighted panel OLS regressions of both the frequency and absolute size of price increases and decreases on month fixed effects, additionally controlling for year and variety fixed effects. [Figure C.2](#) plots the resulting coefficients and their confidence intervals.

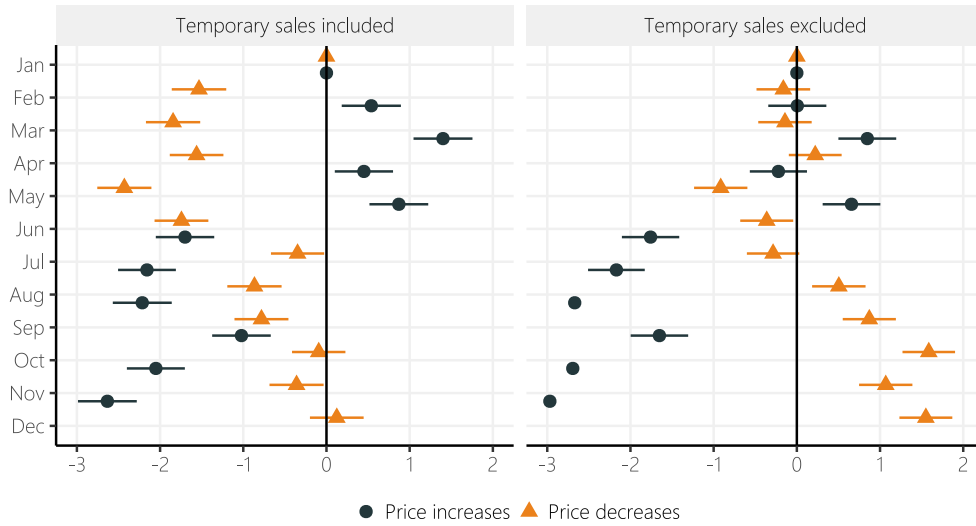
Figure C.1. Distribution of additional price-setting moments across varieties over time



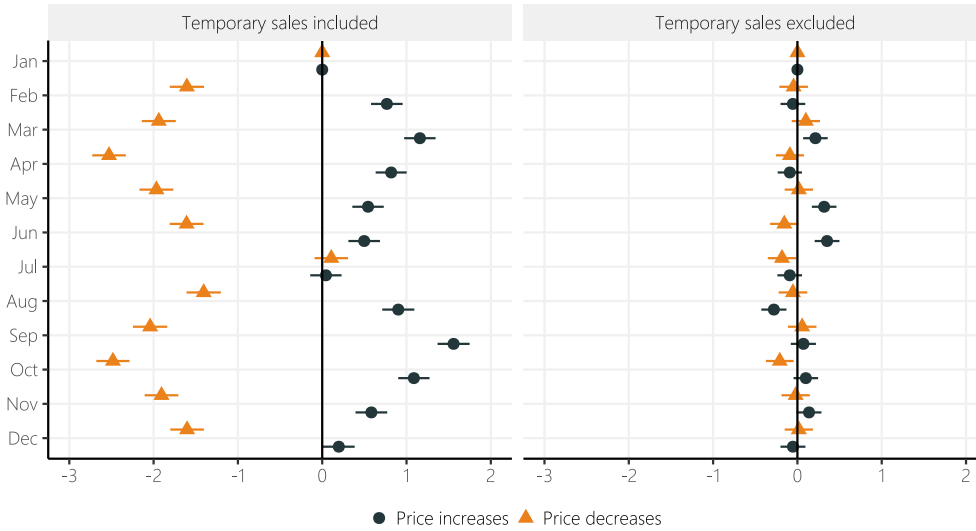
Notes: Cross-sectional distribution of price-change moments across varieties in Swiss CPI micro-data over time. The top row reports the frequency of price increases and decreases, the middle row their corresponding sizes, and the bottom row the frequency and size of sales-related price changes. The sample spans January 2008 to December 2025 and includes price changes due to temporary sales and product substitutions. Each panel displays the mean, the median, the interquartile range (dark-shaded areas), and the 15th–85th percentile range (light-shaded areas). Moments are reported in percent per month.

Figure C.2. Seasonality in the frequency and size of price changes

Frequency of price changes



Size of price changes



Notes: Coefficient plots from weighted panel regressions of the monthly frequency (top row) and absolute size (bottom row) of price changes at the variety level on month fixed effects. Left-hand panels show results including temporary sales; right-hand panels exclude price changes associated with sales and promotions. All regressions control for variety and year fixed effects and use product-level expenditure weights. The dependent variables are separately estimated for price increases and price decreases. The base month is January. Vertical bars indicate 95% confidence intervals.

Both the frequency and the size of price changes exhibit marked and statistically significant seasonal movements. Seasonality is particularly pronounced for price increases, whereas price decreases show weaker and often statistically insignificant seasonal fluctuations once sales are removed.

When temporary sales are included, the estimated month effects for the frequency of price changes show substantial and highly significant seasonal variation. The frequency of price increases is elevated from February to May (up to +1.4 pp) and then drops sharply from June onward, reaching its lowest point in December (−2.7 pp). By contrast, the frequency of price decreases shows negative effects for most months early in the year (e.g., −2.5 pp in May) but essentially no meaningful seasonal spike in July.

Excluding price changes related to sales and promotions attenuates but does not eliminate these patterns. For price increases, strong and significant negative effects between June and December remain (e.g., −3.0 pp in December), indicating a persistent seasonal component in regular (non-sale) pricing. For price decreases, however, once sales are excluded, month effects are smaller in magnitude and only significant in the second half of the year. The largest positive spikes occur in October (+1.6 pp) and December (+1.5 pp), suggesting some seasonal tendency for regular price cuts towards the end of the year.

Seasonality in the absolute size of price changes is also evident but again operates primarily through sales. With sales included, the size of price increases peaks in March and September (+1.1 pp and +1.6 pp), while the size of price decreases becomes much larger in absolute value in April (+2.6 pp) and in October (+2.5 pp). These movements largely mirror the timing of seasonal promotions.

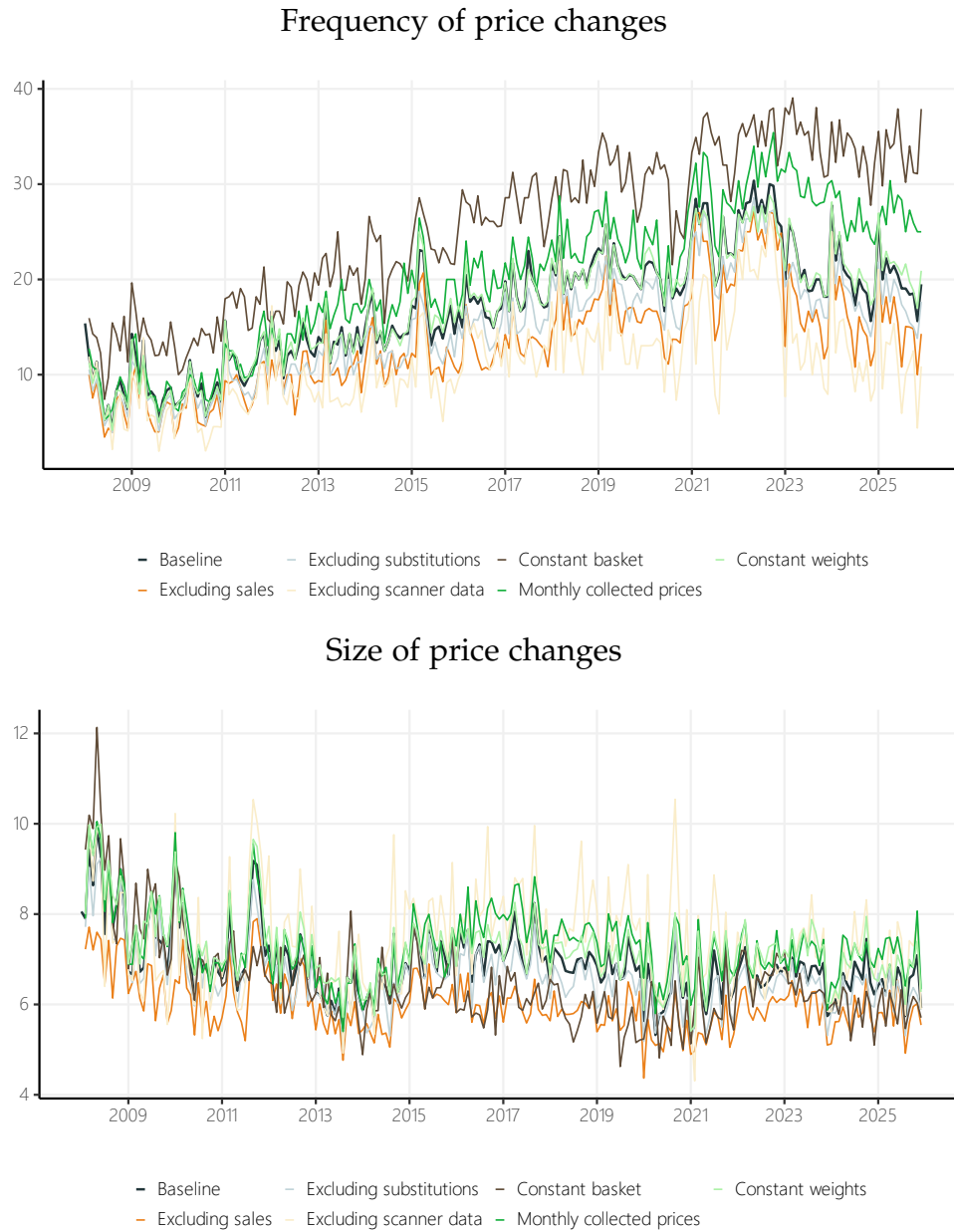
Once sales-related price changes are removed, the seasonal amplitude becomes much smaller. The size of regular price increases varies modestly across months—at most ± 0.30 pp—with only March and May showing small significant positive effects. For regular price decreases, the estimated coefficients are generally close to zero and mostly insignificant, indicating virtually no meaningful seasonality in the size of non-sale price cuts in Switzerland.

C.3 Robustness of trends in price-setting moments

The variations in the frequency and size of price changes over time are shown in [Figure 1](#) in the main text. In what follows, we examine whether the results shown

in these figures are robust to alternative datasets. “Baseline” refers to the sample including temporary sales and product substitutions used in [Figure 1](#). “Excluding sales” refers to the sample excluding price changes related to temporary sales. “Excluding substitutions” refers to the sample excluding price changes related to product substitutions. “Excluding scanner data” refers to the sample excluding items collected by scanner. Scanner data were continuously introduced in 2008, 2010, 2012, and 2016. The price of an item collected via scanner data is calculated as the unit value price during the first 14 days of the month, i.e., the ratio of sales revenue from a product to the quantity sold. To the extent that there are temporary discounts, this generates spurious price changes. The “constant basket” is based on items that are consistently part of the basket of goods and services from 2008 to 2025 (and accordingly neglects items that are introduced or discontinued during the period). “Monthly collected prices” are based on prices that have been collected at only a monthly frequency since 2008. “Constant weights” uses time-invariant CPI weights (averaged over the sample period) in the aggregation. [Figure C.3](#) plots the median frequency (top panel) and median absolute size (bottom panel) of price changes in CPI microdata from January 2008 to December 2025 for these alternative datasets. The lines in the top panel show an upward trend, whereas the lines in the lower panel are mostly flat. Therefore, our conclusions on the trends in the frequency and absolute size of price changes are robust to the alternative datasets considered here.

Figure C.3. Sensitivity of the frequency and size of price changes to different sample compositions

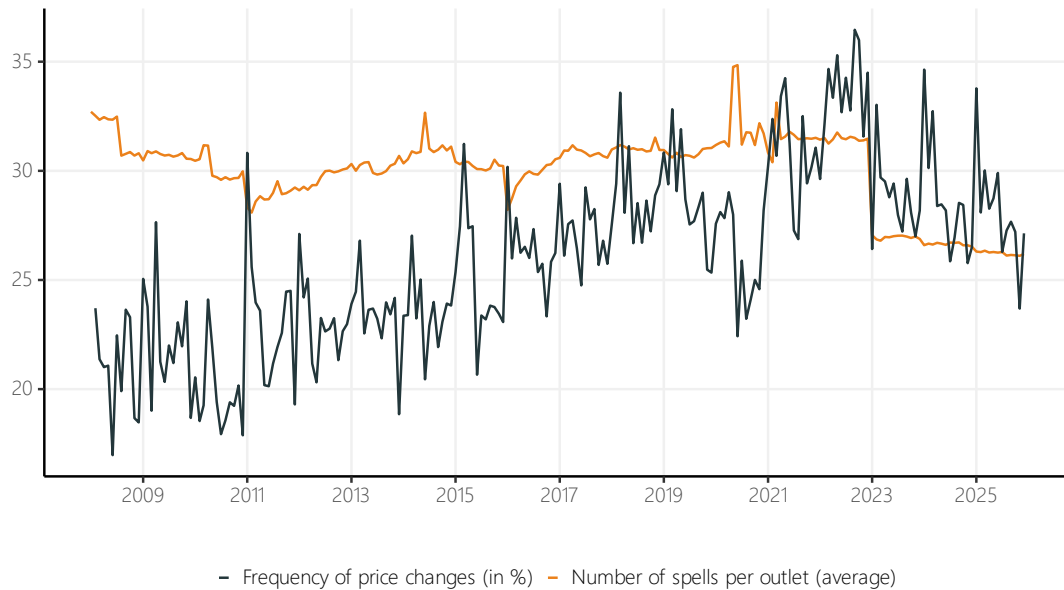


Notes: Sensitivity of the median frequency (top panel) and absolute size of price changes (bottom panel) in Swiss CPI microdata from January 2008 to December 2025 across different sample compositions. All moments are reported in percent per month.

Furthermore, we examine whether the upward trend in the frequency of price changes is related to an increase in the number of goods per outlet. [Figure C.4](#) shows the average number of prices collected per outlet and month and the av-

erage frequency of price changes. We observe that the average number of prices collected per outlet varies little over time, while the frequency of price changes shows an upward trend. The correlation between the two series is positive but very low (Pearson correlation coefficient of $+0.07$). The correlation coefficient stays close to zero when calculating correlations at the level of main groups (not reported in [Figure C.4](#)).

Figure C.4. Number of spells and frequency of price changes



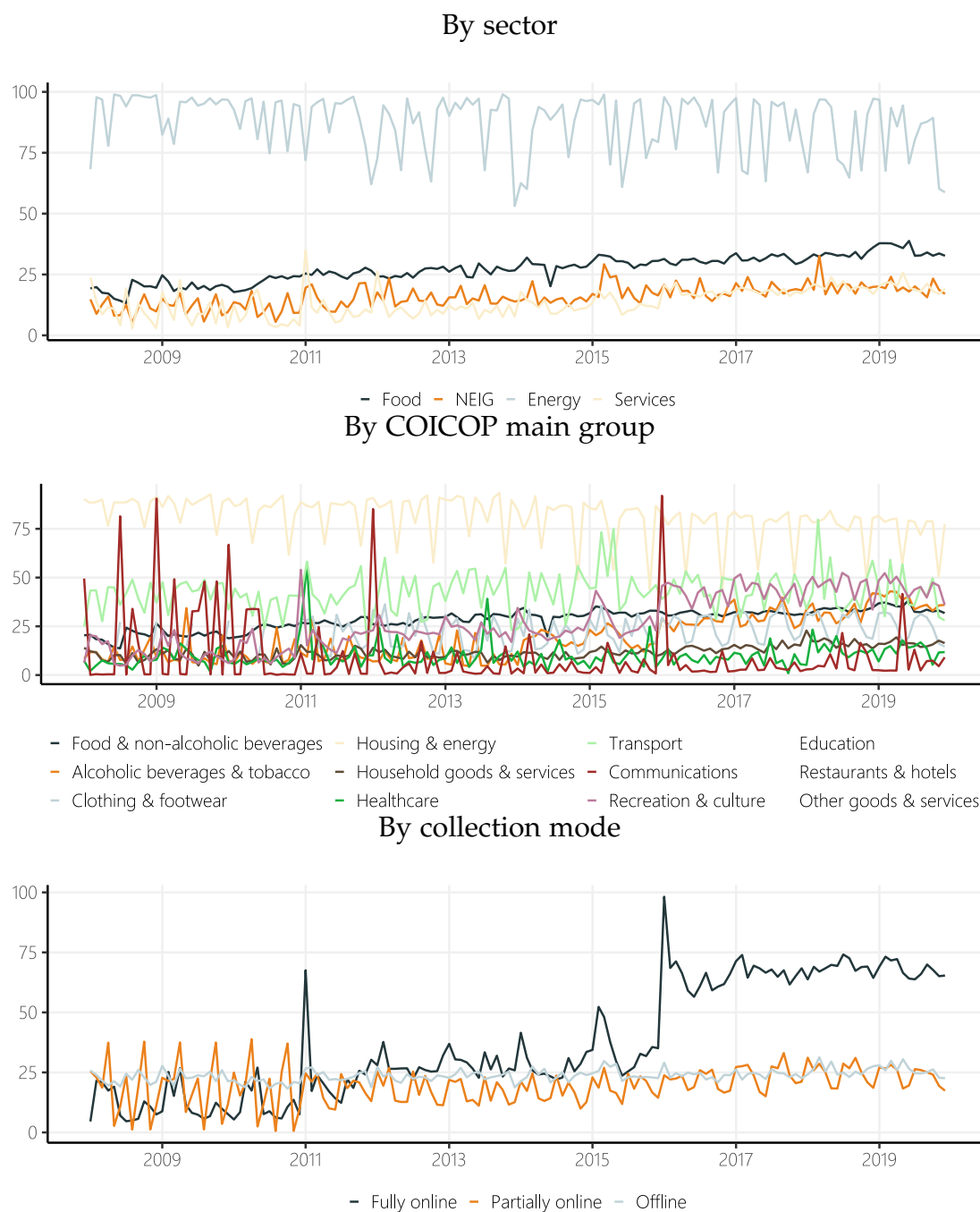
Notes: Average frequency of price changes (left axis) and average number of price spells per outlet per month (right axis) for the baseline sample from January 2008 to December 2025, including temporary sales and product substitutions.

C.4 Price setting before the pandemic

[Figure C.5](#) shows the average frequency of price changes over time by sector (in the top panel), by COICOP two-digit main group (middle panel), and mode of price collection (bottom panel) using the sample that includes price changes due to temporary sales and product substitutions.

Among the four main sectors, the increase is most pronounced in food and non-energy industrial goods (NEIG). For food, the average frequency rises from 18.4 percent in 2008 to 35.3 percent in 2019. This shift is driven by food & non-alcoholic beverages, which increase from 19.2 percent to 34.6 percent, and even more so by

Figure C.5. Cross-sectional frequency of price changes over time



Notes: Monthly frequency of price changes from January 2008 to December 2025, decomposed by sector (top panel), COICOP two-digit main group (middle panel), and mode of price collection (bottom panel). All series include price changes due to temporary sales and product substitutions and are reported in percent per month.

alcoholic beverages & tobacco, which more than triple from 10.9 to 38.0 percent. NEIG also exhibit a substantial increase—from 11.3 percent to 19.3 percent—though this masks heterogeneity across categories. The acceleration is driven mainly by household goods & services, where frequencies rise from around 10 percent in 2008 to roughly 16 percent by 2019. Other components, such as recreation & culture, show similar upward movement. By contrast, communications remains broadly stable despite year-to-year volatility, consistent with regulated pricing and slower technological cycles.

Services show a rise from 10.5 percent to 20.1 percent, but again the increase is uneven. Market-exposed services such as transport and restaurants & hotels rise notably—from 39.6 percent to 48.4 percent and 8.3 percent to 11.3 percent, respectively. By contrast, regulated services such as education and healthcare remain low and stable at around 8–12 percent, underscoring the role of institutional constraints.

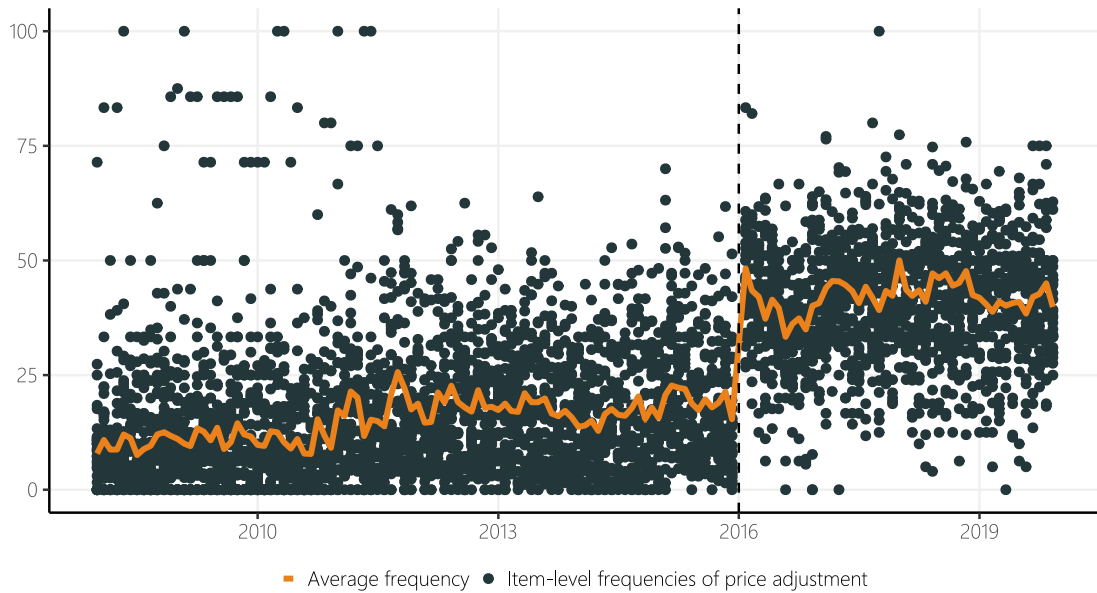
Energy prices, which are already highly flexible, decline modestly from 93.3 percent to 81.0 percent though energy-related categories under housing remain close to 90 percent, with only minor fluctuations over time.

The mode of price collection emerges as a key driver of the aggregate trend. Items collected exclusively online exhibit a dramatic increase in adjustment frequency—from 11.4 percent in 2008 to 67.9 percent in 2019—consistent with the adoption of algorithmic and dynamic pricing in e-commerce. Partially online items also increase slightly (from 17.7 percent to 23.7 percent), with a visible acceleration after 2015. By contrast, exclusively offline items remain almost unchanged, increasing only from 22.3 percent to 26.0 percent. This pattern indicates that the rise in the aggregate frequency is driven disproportionately by items increasingly collected online, rather than a uniform shift in offline pricing.

[Figure C.6](#) illustrates the effect of the methodological change in the collection of consumer electronics prices on their frequency of price changes. With the transition to online price collection in January 2016, the frequency of price changes more than doubled. This discontinuity indicates that price-setting behavior differs greatly depending on the sales channel (online versus stationary retail).

[Table C.1](#) complements the event-study results in [Figure 2](#) and reports difference-in-differences estimates comparing items that transition to fully or partially online price collection with items that remain offline, for both the frequency and the size

Figure C.6. Discontinuity in the frequency of price changes for consumer electronics between prices collected in-store (before 2016) and online (since 2016)



Notes: Item-level frequencies of price adjustments of consumer electronics items. The sample ranges from January 2008 to December 2019 and includes price changes due to temporary sales and product substitutions. The prices of consumer electronics items have been collected exclusively via the internet since January 2016 (and were collected previously in regular outlets and only partially online). The frequencies are reported in percent per month.

of price changes.

Table C.1. Difference-in-differences estimates of the online price-collection switch

	Dependent variable			
	Frequency of price changes (f)		Size of price changes (s)	
	(1) Fully online	(2) Partially online	(3) Fully online	(4) Partially online
T_v	16.039*** (−0.070)	−25.738*** (0.024)	2.931*** (0.002)	−2.712*** (−0.025)
Post_t	2.038*** (−0.193)	2.056*** (−0.188)	0.925*** (−0.083)	1.096*** (−0.081)
$T_v \times \text{Post}_t$	24.474*** (1.967)	2.056*** (0.826)	−2.574*** (0.830)	−1.229*** (0.114)
Constant	26.167*** (0.189)	26.870*** (0.181)	9.368*** (0.098)	9.254*** (0.093)
Observations	13,836	15,470	13,850	15,477
R^2	0.754	0.754	0.298	0.348

Notes: Difference-in-differences estimates of the effect of the transition to online price collection on price-setting behavior, based on the specification $x_{v,t} = \alpha + \beta(T_v \times \text{Post}_t) + \lambda_v + \theta_t + \varepsilon_{v,t}$. The dependent variable is the monthly frequency of price changes (columns 1–2) or the absolute size of price changes (columns 3–4). T_v identifies treated items; Post_t is an indicator for months from January 2016 onward. Columns (1) and (3): fully online treated items (consumer electronics) versus always-offline items. Columns (2) and (4): partially online items versus always-offline items. All specifications include item fixed effects and month-by-year fixed effects. Standard errors, clustered at the item level, are reported in parentheses. Statistical significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

C.5 Price setting during the pandemic

Figure C.7 shows the frequency of price increases (in the top left panel) and price decreases (in the bottom left panel), and the absolute size of price increases (in the top right panel) and absolute price decreases (in the bottom right panel) during the pandemic from January 2020 to December 2023.

To gain insight into the cross-sectional heterogeneity of the response of price-setting behavior to the COVID-19 shock, we examine the frequency and the size of price changes across sectors. Figure C.8 shows the frequency of price changes for food, NEIG, and services, again for all price changes (in the top row) and then separately for price increases (in the middle row) and price decreases (in the bottom row).

For food items, the frequency of price changes in 2020 did not deviate much from

Figure C.7. Frequency and size of price changes, increases, and decreases during the pandemic



Notes: This figure shows the frequency of price increases (in the top left panel) and price decreases (in the bottom left panel), and the absolute size of price increases (in the top right panel) and absolute price decreases (in the bottom right panel) during the pandemic from January 2020 to December 2023. The shaded areas show the mean of the respective measures from January 2018 to December 2019 and the dispersion measured as the standard deviation around the mean (resulting in two-standard-deviation bands). The sample includes temporary sales and product substitutions but excludes COVID imputations. All moments are reported in percent per month.

the average of the previous two years. However, distinguishing between price increases and decreases reveals that the frequency of price increases increased, and the frequency of price decreases decreased, suggesting a response of retail food pricing to the excess demand during the pandemic, particularly in the spring of 2020 (see [Figure 3](#)). In 2021 and 2022, the frequency of price changes increased significantly, driven by more frequent price increases. The frequency of price increases peaked at 25.6 percent in May 2022, exceeding its pre-pandemic average by 8.4 percentage points.

In the case of NEIG, retailers changed their prices at a similar frequency in 2020 as in the two years prior to the pandemic. In 2021 and 2022, the frequency of

price increases contributed to the rise in the overall frequency of price changes. In April 2022, the frequency of price changes reached 23.1 percent, with price increases occurring more than twice as often as the pre-pandemic average.

In services, where the decline in demand resulting from the various containment measures was most severe and prolonged, the frequency of price changes dropped significantly. The largest declines occurred in the spring of 2020 and winter of 2021, coinciding with increasing numbers of COVID-19 cases and more stringent containment measures. While the frequency of price decreases remained below its pre-pandemic average from 2020 to 2022, the frequency of price increases exceeded its pre-pandemic average from early 2022 onward.

Looking at the same set of graphs for the size of price changes in [Figure C.9](#), we notice a significant decline in the size of price changes for NEIG and services throughout the pandemic. The absolute size of price changes was smaller in almost every month than before the pandemic. When we distinguish between price increases and price decreases, we find that both price increases and price decreases were smaller on average compared to the two previous years.

Evaluating the frequency and size of price changes during the pandemic shows heterogeneous responses of Swiss price setters to the COVID-19 shock across sectors. This is in line with [Henkel et al. \(2023\)](#), who analyze national CPI microdata for Germany, Italy, Latvia and Slovakia, and show pronounced differences across sectors and countries in how price setting responded to the pandemic. By contrast, the response of Swiss firms to the surge in inflation in 2022 is much more uniform and harmonized, driven by a broad-based increase in the frequency of price increases across sectors.

The results in the top panels of [Figure C.10](#) show that discount policies varied strongly across sectors already before the pandemic. Between January 2018 and December 2019, an average of 6.3 percent of all NEIG prices were temporarily discounted. By contrast, temporary sales played virtually no role in services (0.1 percent) and accounted for only a small share of food prices (1.3 percent). Following the outbreak of the pandemic, the frequency of temporary sales increased significantly for NEIG. It amounted to 14.7 percent on average in 2020, which is more than double the pre-pandemic level. In July 2020, more than 20 percent of all NEIG prices were sales prices. From 2021 onwards, the frequency of sales declined again, falling below its pre-pandemic average at 4.9 percent. Also, for services, we find that the frequency of sales increased by a factor of 3 to 0.3 percent

Figure C.8. Frequency of price changes, increases, and decreases across sectors during the pandemic



Notes: Frequency of price changes (in the top row), price increases (in the middle row), and price decreases (in the bottom row) across sectors during the pandemic from January 2020 to December 2022. The shaded areas show the mean of the respective measures from January 2018 to December 2019 and the dispersion measured as the standard deviation around the mean (resulting in two-standard-deviation bands). The sample includes temporary sales and product substitutions but excludes COVID price imputations. All moments are reported in percent per month.

Figure C.9. Size of price changes, increases, and decreases across sectors during the pandemic

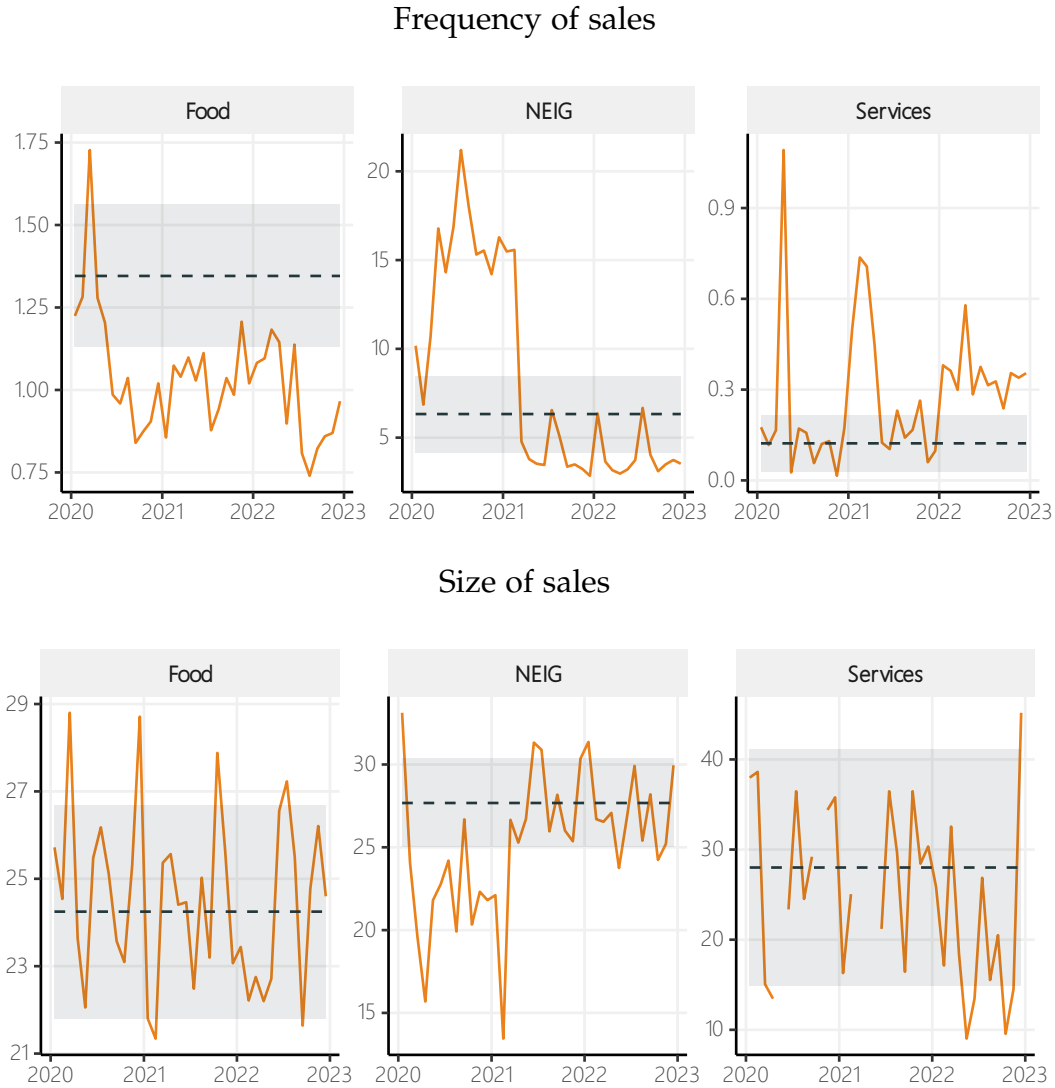


Notes: Absolute size of price changes (in the top row), price increases (in the middle row), and price decreases (in the bottom row) across sectors during the pandemic from January 2020 to December 2022. The shaded areas show the mean of the respective measures from January 2018 to December 2019 and the dispersion measured as the standard deviation around the mean (resulting in two-standard-deviation bands). The sample includes temporary sales and product substitutions but excludes COVID price imputations. All moments are reported in percent per month.

on average during the pandemic. By contrast, the frequency of sales decreased in the food sector, where demand increased with the pandemic. It dropped to 1.1 percent, on average, from January 2020 to December 2025, which corresponds to a decline of one-fifth compared to the pre-pandemic level. This decline is in line with findings of [Henkel et al. \(2023\)](#), who show that supermarket retailers in Germany and Italy responded to the positive demand shock following the outbreak of the pandemic by reducing the frequency of temporary sales.

The lower panels of [Figure C.10](#) show the size of temporary price discounts across sectors. In 2020, discounts for NEIG were smaller than in the previous two years. From March 2020 to May 2021, the size of sales-related price changes was 22.9 percent on average and thus 6.0 percentage points smaller than in the two years prior to the pandemic. Retailers of NEIG appear to have cushioned the large losses of revenues during the lockdown with smaller but more frequent temporary sales. For food and services, we find no significant change in the size of temporary discounts. Taken together, the evidence on the frequency and size of temporary sales during the COVID-19 pandemic suggests that retailers adjust their use of temporary sales to macroeconomic shocks. In particular, the frequency of sales displayed a strongly countercyclical pattern in response to the pandemic. This finding contributes to the literature highlighting the responsiveness of temporary sales to aggregate shocks (e.g., [Klenow and Willis, 2007](#); [Kryvtsov and Vincent, 2021](#)).

Figure C.10. Frequency and size of sales across sectors during the pandemic



Notes: The frequency of sales (in the top panels) and the (absolute) size of sales (in the bottom panels) across sectors during the pandemic from January 2020 to December 2022. The shaded areas show the mean of the respective measures from January 2018 to December 2019 and the dispersion measured as the standard deviation around the mean (resulting in two-standard deviation bands). The sample includes temporary sales and product substitutions but excludes COVID price imputations. All moments are reported in percent per month.

In [Table C.2](#), we regress the price-setting moments on the subindices of the KOF Stringency Index to disentangle containment measures with stronger and weaker effects. Among the COVID-related restrictions with the strongest effects on the frequency of price adjustments are cancellations of public events, school closure and international travel controls. Weakest effect of restrictions on gatherings.

Table C.2. Effects of containment measures on the frequency of price changes

	Frequency of price changes							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
School	−2.069*** (0.164)							
Workplace		−1.380*** (0.155)						
Events			−2.287*** (0.174)					
Gatherings				−0.697*** (0.089)				
Transport					−1.490*** (0.338)			
Stay-at-home						−1.668*** (0.471)		
Domestic travel							−1.631*** (0.464)	
Int. travel								−1.674*** (0.100)
Observations	6,983	6,983	6,983	6,983	6,983	6,983	6,983	6,983
R^2	0.011	0.005	0.010	0.005	0.003	0.002	0.002	0.022
Adjusted R^2	−0.025	−0.032	−0.026	−0.031	−0.033	−0.034	−0.034	−0.014

Notes: Panel regressions of the item-level frequency of price changes on individual subindices of the KOF Stringency Index, estimated separately for each containment measure. Each column uses a single containment subindex as the explanatory variable. All subindices are normalized to range from 0 to 100. The sample covers the pandemic period (February 2020–May 2021) and includes item fixed effects. Standard errors are reported in parentheses. Statistical significance: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table C.3 reports panel regression results for the frequency of price increases and decreases during the pandemic, relating item-level adjustment behavior to containment stringency, sectoral demand conditions, and their interaction.

Table C.3. Pandemic conditions and the frequency of price increases and decreases

	Frequency of price increases			Frequency of price decreases		
	(1)	(2)	(3)	(4)	(5)	(6)
Stringency index	−0.047*** (0.006)		0.005 (0.009)	−0.025*** (0.005)		0.018** (0.007)
Debit card spending		5.117*** (0.499)	8.588*** (0.936)		1.572*** (0.423)	5.944*** (0.800)
Stringency × Debit card			−0.110*** (0.018)			−0.114*** (0.015)
Observations	6,983	9,185	6,930	6,983	9,185	6,930
R ²	0.008	0.001	0.008	0.0002	0.00001	0.0001

Notes: Panel regressions of item-level price-setting moments on the KOF Stringency Index, sector-specific debit card spending (measured as deviations from January 2020), and their interaction. The interaction term captures how the effect of containment measures varies with sector-specific demand conditions. The dependent variable is the item-level frequency of price increases (columns 1–3) or decreases (columns 4–6). All specifications include item fixed effects. Standard errors are reported in parentheses. Statistical significance is indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table C.4 presents corresponding panel regression estimates for the absolute size of price increases and decreases, distinguishing how pandemic conditions affect the intensive margin of price adjustment.

Table C.4. Pandemic conditions and the size of price increases and decreases

	Size of price increases			Size of price decreases		
	(1)	(2)	(3)	(4)	(5)	(6)
Stringency index	0.002 (0.002)		0.003 (0.004)	0.003 (0.003)		0.008** (0.004)
Debit card spending		−0.566*** (0.206)	−0.468 (0.378)		0.146 (0.214)	0.786** (0.391)
Stringency × Debit card			−0.007 (0.007)			−0.015* (0.008)
Observations	6,441	8,497	6,394	6,263	8,251	6,216
R ²	0.00002	0.001	0.001	0.0001	0.001	0.001

Notes: Panel regressions of item-level price-setting moments on the KOF Stringency Index, sector-specific debit card spending (measured as deviations from January 2020), and their interaction. The interaction term captures how the effect of containment measures varies with sector-specific demand conditions. The dependent variable is the item-level size of price increases (columns 1–3) or decreases (columns 4–6). All specifications include item fixed effects. Standard errors are reported in parentheses. Statistical significance is indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

Table C.5 reports panel regression results for sales-related price-setting moments, examining how containment measures and sector-specific demand conditions shape the frequency and size of temporary price discounts.

Table C.5. Pandemic conditions and sales-related price-setting moments

	Frequency of sales price changes			Absolute size of sales price changes		
	(1)	(2)	(3)	(4)	(5)	(6)
Stringency index	0.046*** (0.003)		0.013*** (0.004)	−0.014** (0.006)		−0.020** (0.008)
Debit card spending		−1.587*** (0.248)	−4.948*** (0.482)		0.590 (0.529)	−0.312 (1.016)
Stringency × Debit card			0.092*** (0.009)			0.021 (0.019)
Observations	6,983	9,185	6,930	4,200	5,593	4,186
R ²	0.005	0.009	0.009	0.002	0.0002	0.002

Notes: Panel regressions of item-level price-setting moments on the KOF Stringency Index, sector-specific debit card spending (measured as deviations from January 2020), and their interaction. The interaction term captures how the effect of containment measures varies with sector-specific demand conditions. The dependent variable is the item-level frequency (columns 1–3) or absolute size (columns 4–6) of sales price changes. All specifications include item fixed effects. Standard errors are reported in parentheses. Statistical significance is indicated by * $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$.

D. DATA ROBUSTNESS

This appendix presents robustness checks for the data treatment decisions described in [Section 2.6](#), including results excluding items flagged as potentially mismeasured and sensitivity to the trimming of extreme price changes.

D.1 Mismeasurement issues in CPI microdata

As discussed in [Section 2.6](#), we discard the following prices from our dataset to obtain our baseline sample: price imputations (as far as they can be identified), prices derived from auxiliary indices, and prices of administered or semi-administered prices. In addition, we exclude price changes greater than the 99th percentile of absolute log price changes and smaller than the 1st percentile for every variety.

[Eichenbaum et al. \(2014\)](#) raise various concerns with respect to mismeasurement in the context of CPI microdata. In what follows, we examine to what extent these concerns apply to our data. [Eichenbaum et al. \(2014\)](#) identify 27 problematic items in the US CPI. By problematic, they mean that spurious small price changes arise because of the method used to measure prices. Problematic prices are non-transactional prices that are computed as auxiliary indices or pertain to bundles of goods. We are able to match 20 of the 27 items with their counterparts in our Swiss dataset. Of these 20 problematic items, 11 are excluded by our sampling decisions summarized above. The 9 items that remain in the dataset are arguably all single-good transaction prices and are not computed as a unit value index. Nevertheless, we recalculate our results on the frequency and the size of price changes after excluding all items identified as problematic by [Eichenbaum et al. \(2014\)](#). The results are reported in [Table D.1](#), [Table D.2](#) and [Table D.3](#). Comparing these results with [Table 2](#) in the main text and [Table B.1](#) in [Online Appendix B.2](#) we find that the differences are small. None of our conclusions on price-setting behavior is affected.

Table D.1. Frequency of price adjustments, excluding items identified as problematic by [Eichenbaum et al. \(2014\)](#)

	Frequency of price adjustments			Share Increases
	Changes f	Increases f^+	Decreases f^-	
Mean	26.4	13.9	12.5	55.9
Median	16.3	6.7	5.6	
Std. dev.	28.7	20.0	19.3	

Notes: The sample ranges from January 2008 to December 2025 and includes price changes due to temporary sales and product substitutions but excludes all items identified as problematic by [Eichenbaum et al. \(2014\)](#). The frequencies of price “changes,” “increases,” and “decreases” refer to the weighted averages of the shares of price changes, increases, and decreases, respectively. The mean frequency of price changes is calculated by first computing the frequency of price changes for each variety and then taking a weighted mean across all varieties using CPI expenditure weights. Median statistics and statistics of standard deviations are calculated analogously. “Share of increases” refers to the share of price increases in all price changes. Values are reported in percent per month.

Table D.2. Size of price adjustments, excluding items identified as problematic by [Eichenbaum et al. \(2014\)](#)

	Size of price adjustments			
	Average	Absolute	Increases	Decreases
	Changes	Changes		
	Δp	$ \Delta p $	Δp^+	Δp^-
Mean	0.4	11.2	10.6	-11.6
Median	0.7	8.0	7.2	-8.3
Std. dev.	11.5	10.5	10.7	11.3

Notes: The sample ranges from January 2008 to December 2025 and includes price changes due to temporary sales and product substitutions but excludes all items identified as problematic by [Eichenbaum et al. \(2014\)](#). The sizes of “absolute” price changes, price “increases,” and “decreases” refer to the weighted averages of the absolute size of price changes, size of price increases, and absolute size of price decreases, respectively. The mean size of average price changes is calculated by first computing the average size of price changes for each variety and then taking a weighted mean across all varieties using CPI expenditure weights. Median statistics and statistics of standard deviations are calculated analogously. Values are reported in percent per month.

Table D.3. Distribution of the size of price adjustments, excluding items identified as problematic by [Eichenbaum et al. \(2014\)](#)

	Size of price adjustments				
	Changes Δp	Abs. changes $ \Delta p $	Increases Δp^+	Decreases Δp^-	Stand. changes z
Mean	0.1	8.1	8.1	-8.1	0.7
10th percentile	-11.6	0.6	0.5	-35.7	0.1
25th percentile	-3.0	1.3	2.0	-20.5	0.2
50th percentile	0.2	3.2	6.5	-8.0	0.6
75th percentile	3.4	8.5	17.1	-1.9	1.1
90th percentile	11.1	22.3	34.2	-0.4	1.6
Standard deviation	20.5	16.2	16.4	16.0	0.7
Skewness	0.2				0.0
Kurtosis	8.8				5.1

Notes: The sample ranges from January 2008 to December 2025 and includes price changes due to temporary sales and product substitutions but excludes all items identified as problematic by [Eichenbaum et al. \(2014\)](#). The sizes of average price “changes,” “absolute” price changes, price “increases,” “decreases,” and “standardized” price changes refer to the weighted averages of the average size of price changes, absolute size of price changes, size of price increases, size of price decreases, and size of standardized price changes, respectively. The mean size of average price changes is calculated by first computing the average size of price changes for each variety and then taking a weighted mean across all varieties using CPI expenditure weights. Statistics of other moments are calculated analogously. Median statistics and statistics of standard deviations are calculated analogously. Values are reported in percent per month.

D.2 Alternative trimming of the data

The sampling decisions described in [Section 2.6](#) restrict price changes in the data sample to price changes between the 1st percentile and the 99th percentile of the distribution of absolute log price changes. [Table D.4](#) summarizes the statistics for the baseline (Case 0) and three alternative trimming thresholds. Statistics are given for the frequency and absolute size of price changes, the standard deviation, and the kurtosis. The kurtosis values reported in the table decrease when the lower threshold is more stringent.

Table D.4. Robustness of price-setting moments to outlier trimming

Case	Type of trimming	Obs.	f	$ \Delta p $	$sd(\Delta p)$	$Kur(z)$
0	$P1 < \Delta p < P99$	2243932	25.97	10.71	10.31	5.19
1	$0.5\% < \Delta p < P99$	2041726	24.35	11.71	10.42	4.66
2	$1\% < \Delta p < P99$	1880522	22.49	12.33	10.46	4.30
3	$P1 < \Delta p < 100\%$	2269355	26.73	10.81	10.08	5.17

Notes: Robustness of price-setting moments to outlier treatment. The sample ranges from January 2008 to December 2025 and includes price changes due to temporary sales and product substitutions. Case 0 corresponds to the trimming applied in the baseline sample in the main text. “Obs.” denotes the number of price changes, f denotes the monthly frequency of price changes in percent, $|\Delta p|$ is the absolute size of price changes, $sd(|\Delta p|)$ is the standard deviation of the absolute size of price changes, and $Kur(z)$ denotes the kurtosis of the standardized price changes. Moments are aggregated using CPI expenditure weights.

E. PRICE-SETTING BEHAVIOR AND INFLATION DYNAMICS

This appendix refers to [Section 4](#) in the main body of the paper and presents additional analyses that are not featured in the main text.

E.1 Decomposition of inflation into contributions from the frequency and size of price changes

This appendix provides the formal counterfactual definitions underlying the results discussed in [Section 4.1](#), together with the corresponding scatter plots.

Following [Klenow and Kryvtsov \(2008\)](#) or [Wulfsberg \(2016\)](#) we express the monthly item-level inflation rate as

$$\pi_{i,t} \approx \hat{\pi}_{i,t} = f_{i,t} \cdot \Delta p_{i,t}, \quad (18)$$

where $f_{i,t}$ is the frequency of price changes of expenditure item i in month t and $\Delta p_{i,t}$ is the mean of non-zero log price changes of that item, as defined formally in [Online Appendix B.1](#). The variable $\hat{\pi}_t$ is an approximation and not an exact representation of the monthly CPI inflation rate π_t for two main reasons. First, our sample is restricted and does not include administered prices and prices based on unit value indices. Second, our weighting procedure relies solely on item weights from the basket of goods and services, without the additional stratification by regions and distribution channels applied in the calculation of the CPI ([FSO, 2016](#)).

Total frequency and size. Using the approximation in [Equation \(18\)](#), we construct two counterfactual estimates of CPI inflation to assess the contributions of the frequency and size of price changes to variations in inflation. The two estimates differ in that we allow either the frequency or the size of price changes to vary over time while holding the other constant at its item-specific mean. The frequency-related inflation rate, holding the size of price changes constant at Δp_i , is:

$$\hat{\pi}_{i,t} |_{\Delta p} = f_{i,t} \cdot \Delta p_i. \quad (19)$$

All variation in $\hat{\pi}_{i,t}|\Delta p$ is due to variation in the frequencies of price changes. This case is consistent with predictions of a state-dependent model in which firms respond to shocks through the probability (but not the size) of price adjustments. Similarly, holding the frequency of price changes constant at f_i , the size-related inflation rate is:

$$\hat{\pi}_{i,t}|_f = f_i \cdot \Delta p_{i,t}. \quad (20)$$

All variation in $\hat{\pi}_{i,t}|_f$ is due to variation in the size of the price changes. This case is consistent with predictions of a pure [Calvo \(1983\)](#) model in which the probability of price changes is constant over time, and variation in inflation comes only from fluctuations in the size of price changes.

Increases and decreases separately. We can further investigate the contributions of the frequency and size of price changes to inflation variations by distinguishing between price increases and price decreases. In this case, the inflation rate can be written as

$$\hat{\pi}_{i,t} = f_{i,t}^+ \cdot \Delta p_{i,t}^+ + f_{i,t}^- \cdot \Delta p_{i,t}^-, \quad (21)$$

where $f_{i,t}^+$ and $f_{i,t}^-$ are the frequency of price increases and the frequency of price decreases and $\Delta p_{i,t}^+$ and $\Delta p_{i,t}^-$ are the average size of price increases and the average size of price decreases of item i in month t . We consider two counterfactual inflation rates based on [Equation \(21\)](#). The first, $\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$, is similar to the frequency-related inflation, but instead of holding the size of price changes constant, both the size of price increases and the size of price decreases are held constant over time:

$$\hat{\pi}_{i,t}|\Delta p^+, \Delta p^- = f_{i,t}^+ \cdot \Delta p_i^+ + f_{i,t}^- \cdot \Delta p_i^-. \quad (22)$$

The second counterfactual inflation rate, $\hat{\pi}_{i,t}|f^+, f^-$, assumes that the frequency of both price increases and decreases is constant over time:

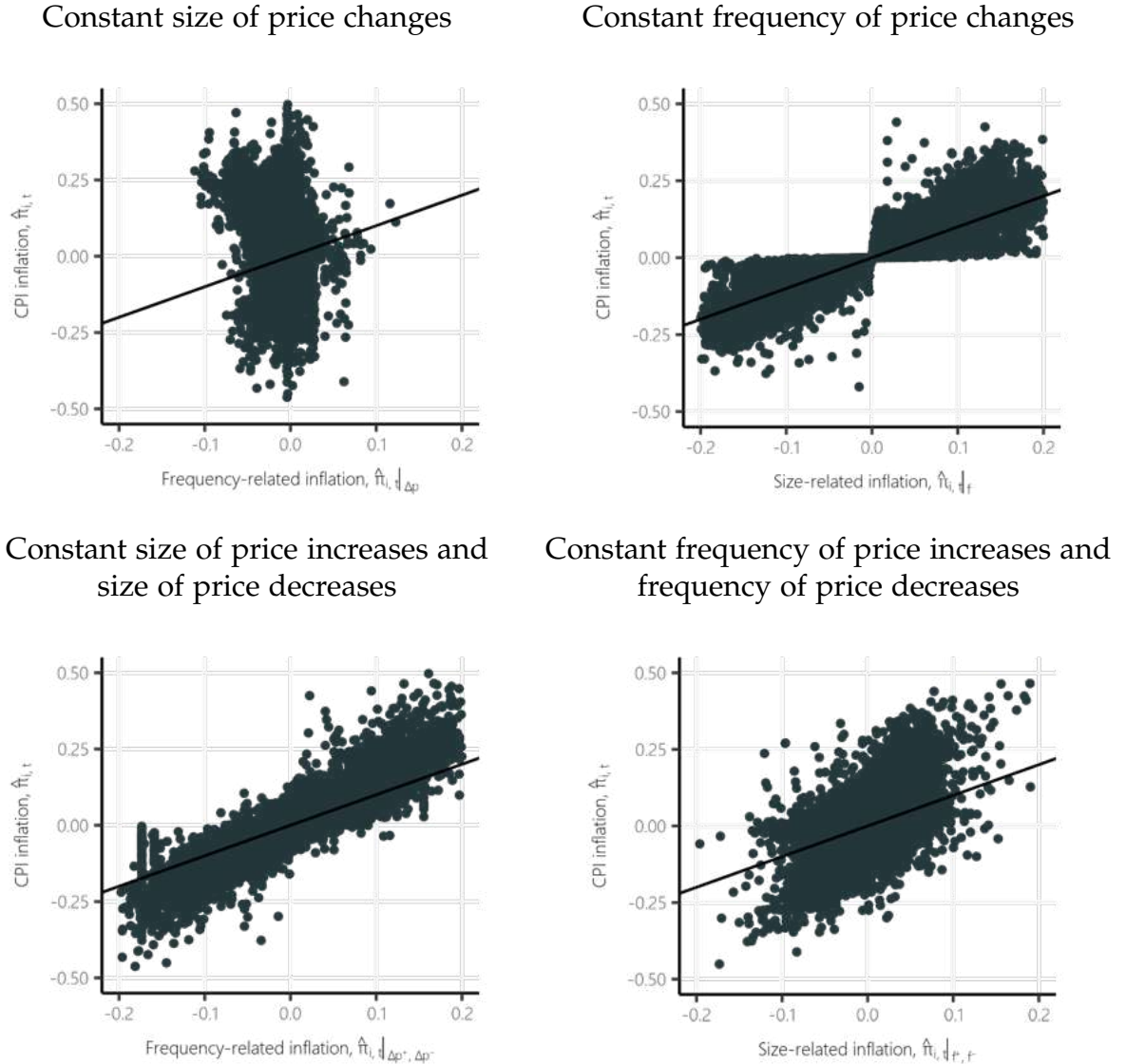
$$\hat{\pi}_{i,t}|f^+, f^- = f_i^+ \cdot \Delta p_{i,t}^+ + f_i^- \cdot \Delta p_{i,t}^-. \quad (23)$$

Thus, the variation in $\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ is due to the variation in the frequencies of

price increases and price decreases, while the variation in $\hat{\pi}_{i,t}|_{f+,f-}$ is due to the variation in the size of price increases and price decreases.

Table 5 reports all four cross-correlations with inflation, and Figure E.1 provides scatter plots of each counterfactual against the actual inflation rate.

Figure E.1. Contributions of the frequency and size of price changes, increases, and decreases to inflation variations



Notes: Scatter plots between inflation, as in Equation (21), and counterfactual inflation rates, as in Equation (19), Equation (20), Equation (22), and Equation (23). The straight lines indicate the 45-degree line. The sample ranges from January 2008 to December 2025 and includes price changes due to temporary sales and product substitutions. A value of 0.1 corresponds to 10 percent.

E.2 Data sources for shocks in local projections

This section provides more information on the shocks used in the estimations of linear and nonlinear local projections.

Oil supply news shocks The oil supply news shocks are the shocks in futures prices around OPEC announcements extracted from the VAR from [Känzig \(2021\)](#). The shock series is regularly updated and currently spans from 1975:01 to 2025:06. The frequency of the series is monthly.

The IRFs are rescaled to produce an inflation reaction to a 10 percent increase in monthly Brent crude oil price changes.

Swiss franc safe haven shocks The Swiss franc safe haven shocks ([Boneva, 2024](#)) are approximated as the changes in a safe haven indicator (SHI) that is constructed as the first principal component from Friday-to-Friday changes in the Swiss franc and a set of financial market variables that typically rise or fall markedly during flight-to-safety episodes (Japanese yen, US dollar, VIX, gold price, 10-year US Treasury term premium, 10-year CH government bond term premium and the EA peripheral spread). The SHI is an unpublished weekly series that is regularly updated by SNB staff and spans from 2000:02 to 2026:03.

The IRFs are rescaled to produce an inflation reaction to a 10 percent depreciation of the Swiss franc against the euro. Hence, we reverse the Swiss franc safe haven shocks.

Supply chain shocks The supply chain shocks are structural shocks identified using disruptions to maritime trade at key shipping choke points, following a narrative and high-frequency identification strategy in [Känzig and Raghavan \(2026\)](#). The series is constructed from exogenous incidents at the Suez and Panama Canals, using surprise movements in shipping rates around these events as instruments in a VAR model to isolate supply chain shocks. The shock series is regularly updated and currently spans from 1971:01 to 2023:12. The frequency of the series is monthly.

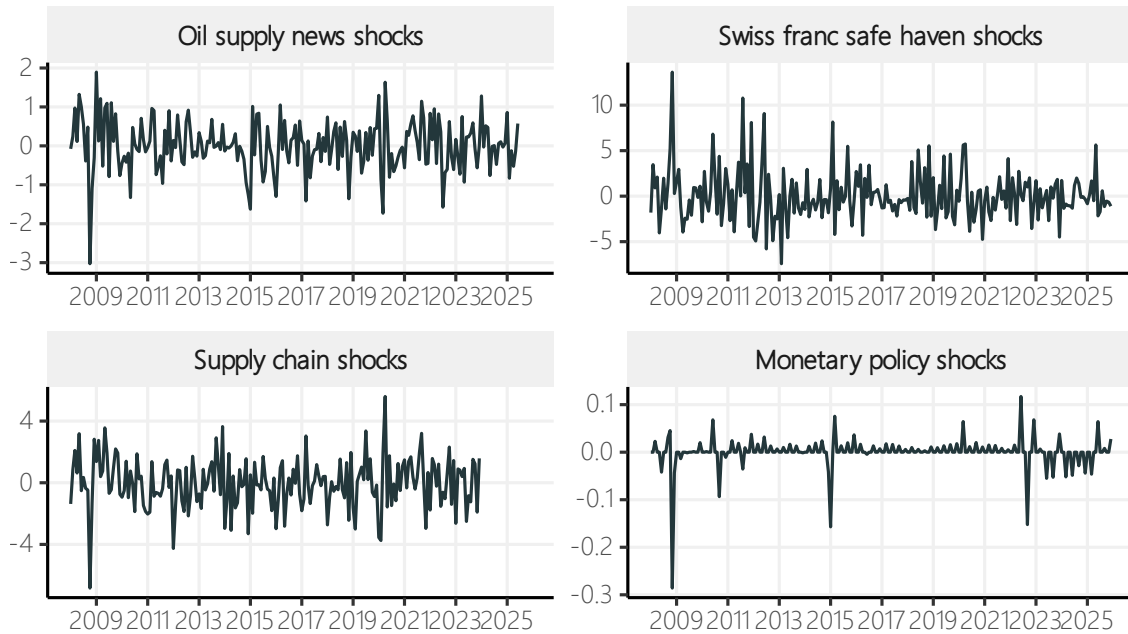
The IRFs are rescaled to produce an inflation reaction to a 10 percent increase in monthly changes in real shipping cost as measured by the Baltic Dry Index.

Monetary policy shocks The monetary policy shocks are provided by [Nitschka and Oktay \(2023\)](#), applying the identification approach of [Bu et al. \(2021\)](#) and [Ciminelli et al. \(2022\)](#) for Switzerland. The shock series spans from January 2000 to December 2025.

The IRFs are rescaled to produce an inflation reaction to a positive surprise in the 3-month EONIA swap rate of 25 basis points.

[Figure E.2](#) shows the time series of the four aggregate shocks used in the linear and nonlinear local projections, plotted over the estimation sample from January 2008 to December 2025.

Figure E.2. Aggregate shocks used in local projections estimations



Notes: Time series of the four aggregate shocks used in the linear and nonlinear local projections, plotted over the estimation sample from January 2008 to December 2025. From top left to bottom right: oil supply news shocks ([Känzig, 2021](#)), Swiss franc safe haven shocks ([Boneva, 2024](#)) (sign-reversed so that positive values indicate depreciation), supply chain shocks ([Känzig and Raghavan, 2026](#)), and monetary policy shocks ([Nitschka and Oktay, 2023](#)).

E.3 Robustness to the inclusion of the pandemic period

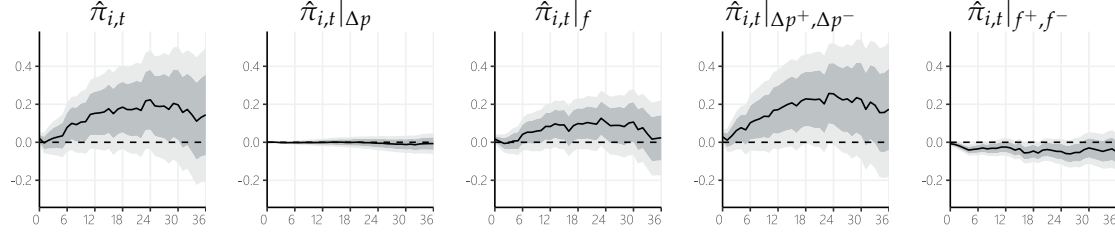
The results presented in the main body of the paper include exogenous dummy variables equal to one during the months with pandemic containment measures (i.e., during the period from February 2020 to May 2021) to mitigate the influence

of extreme outliers related to the COVID-19 pandemic. This section analyzes the robustness of these results to the inclusion of the pandemic period in the estimation.

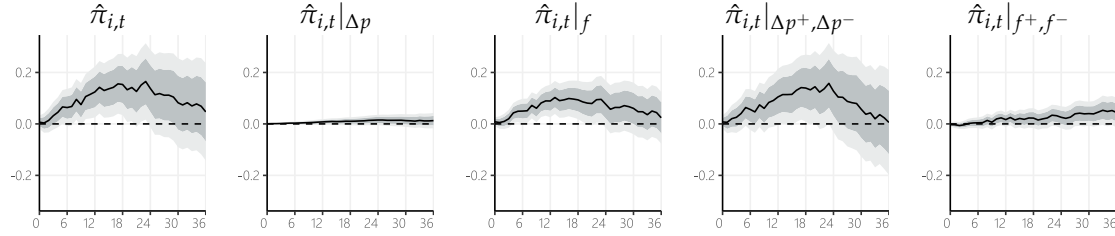
Figure E.3 shows the impulse response functions of recomposed and counterfactual inflation rates to aggregate shocks estimated using linear local projections, while Figure E.4 shows the corresponding IRFs estimated using nonlinear local projections. The resulting IRFs are qualitatively similar although more volatile when the pandemic is included.

Figure E.3. Conditional responses of recomposed and counterfactual inflation rates to aggregate shocks from linear local projections, excluding COVID dummies

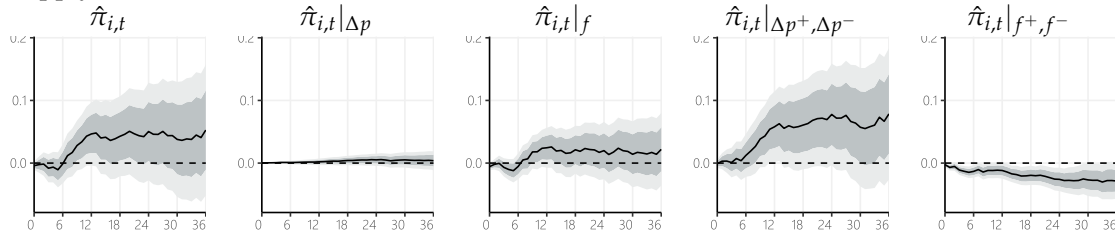
Oil supply news shocks



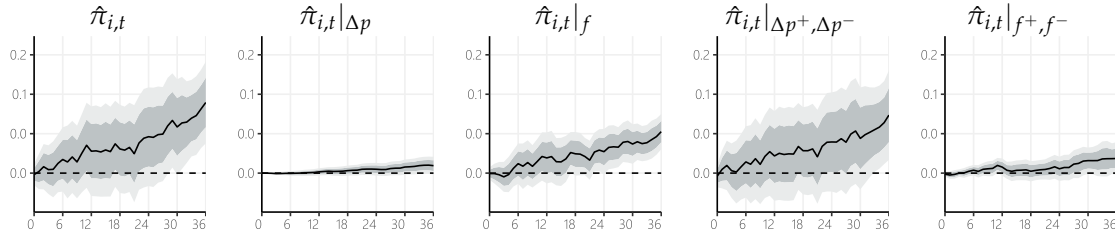
Swiss franc safe haven shocks



Supply chain shocks



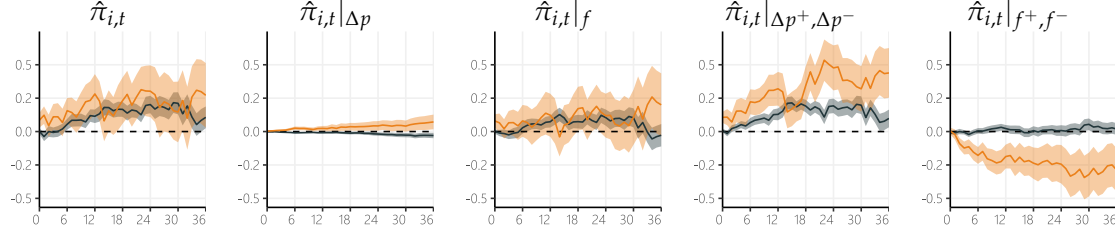
Monetary policy shocks



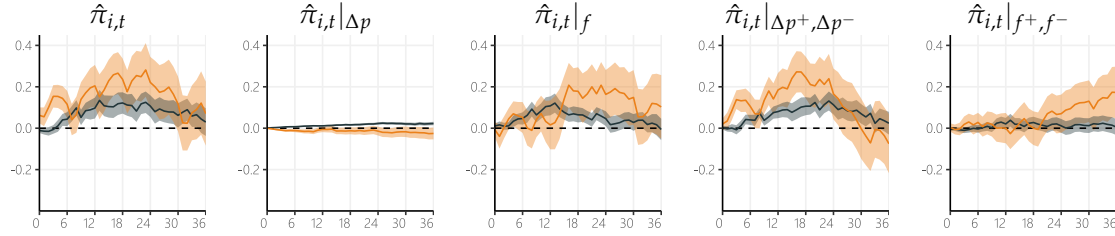
Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to aggregate shocks estimated using panel linear local projections and the sample of CPI microdata from January 2008 to December 2025 that includes price changes due to temporary sales and product substitutions. The models are specified in Equation (2), but estimated without pandemic dummy variables. The rows represent the IRFs to the different shocks: oil supply news, safe haven, supply chain, and monetary policy. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|_f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ and $\hat{\pi}_{i,t}|_{f^+, f^-}$). The dark- and light-gray areas are the 68 and 90 percent confidence bands, respectively.

Figure E.4. Conditional responses of recomposed and counterfactual inflation rates to aggregate shocks from nonlinear local projections, excluding COVID dummies

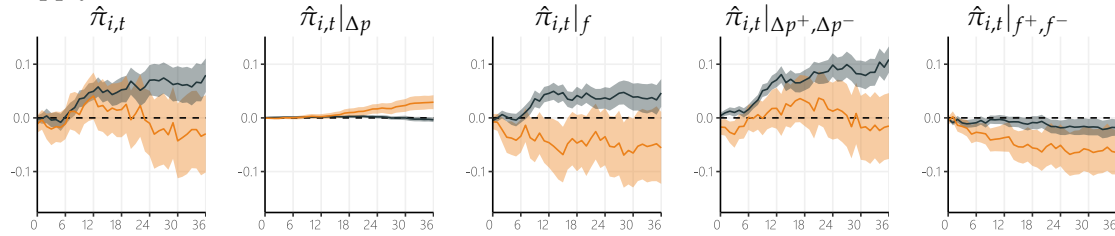
Oil supply news shocks



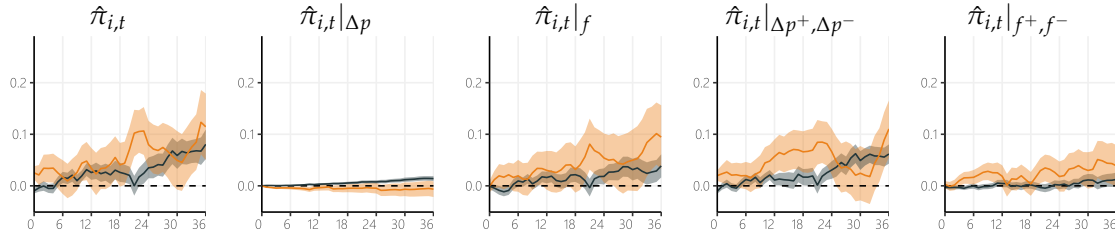
Swiss franc safe haven shocks



Supply chain shocks



Monetary policy shocks



■ High sufficient statistic ■ Low sufficient statistic

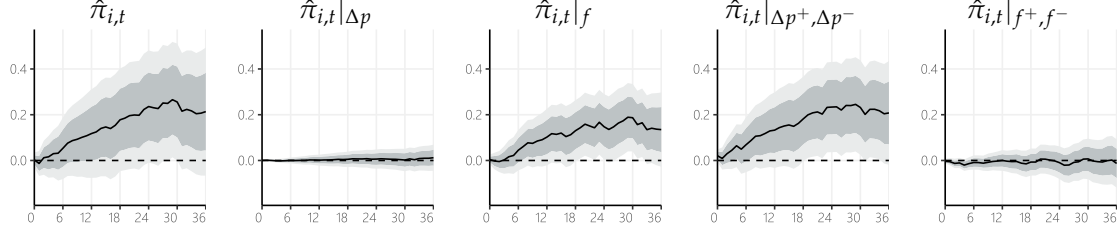
Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to aggregate shocks estimated using panel nonlinear local projections and the sample of CPI microdata from January 2008 to December 2025 that includes price changes due to temporary sales and product substitutions. The models are specified in Equation (4), but estimated without pandemic dummy variables. The state variables are the item-level sufficient statistics calculated as in Equation (3). The rows represent the IRFs to the different shocks: oil supply news, safe haven, supply chain, and monetary policy. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|_f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ and $\hat{\pi}_{i,t}|_{f^+, f^-}$). The areas are the 68 percent confidence bands.

E.4 Robustness to treatment of price changes due to temporary sales and product substitutions

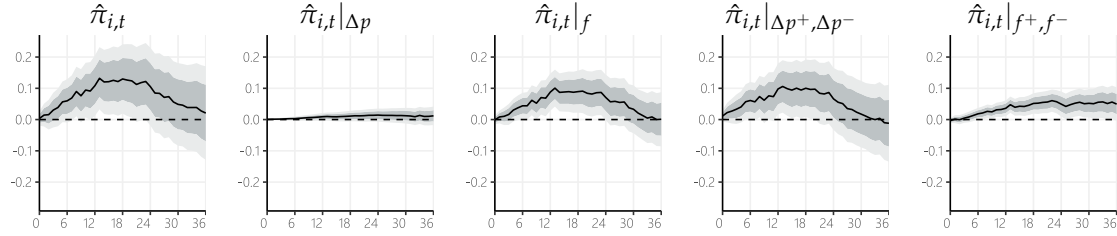
The results presented in the main body of the paper rely on the baseline sample that includes price changes due to temporary sales and product substitutions. This section analyzes the robustness of these results to the treatment of temporary sales and product substitutions. The IRFs are qualitatively similar when price changes due to temporary sales ([Figure E.5](#)), or product substitutions ([Figure E.6](#)), or both ([Figure E.7](#)) are excluded.

Figure E.5. Conditional responses of recomposed and counterfactual inflation rates to aggregate shocks from linear local projections, excluding price changes due to temporary sales

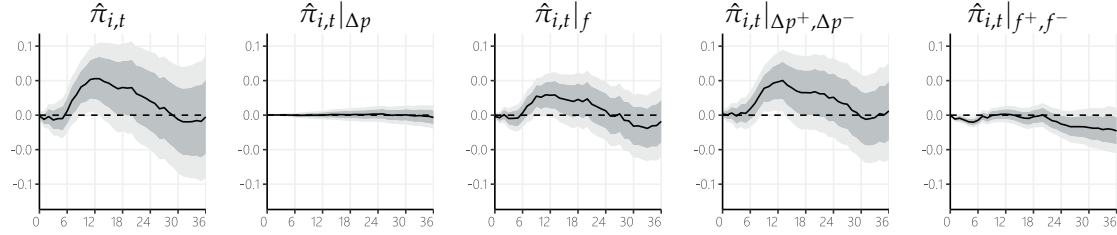
Oil supply news shocks



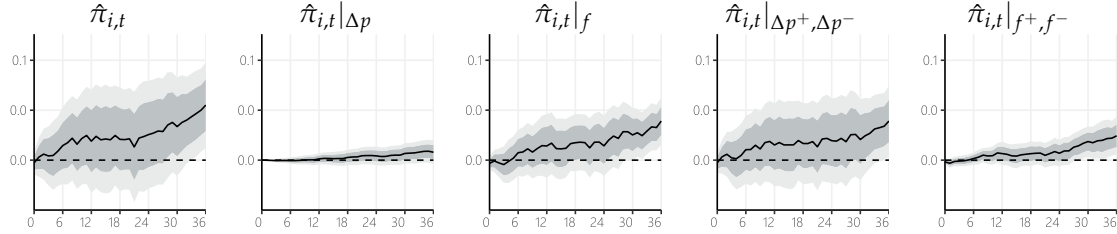
Swiss franc safe haven shocks



Supply chain shocks



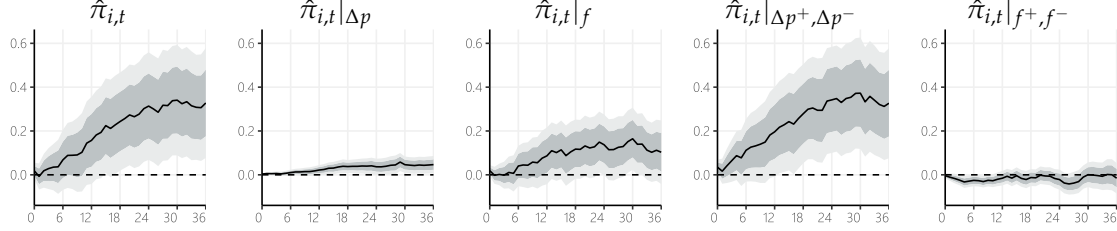
Monetary policy shocks



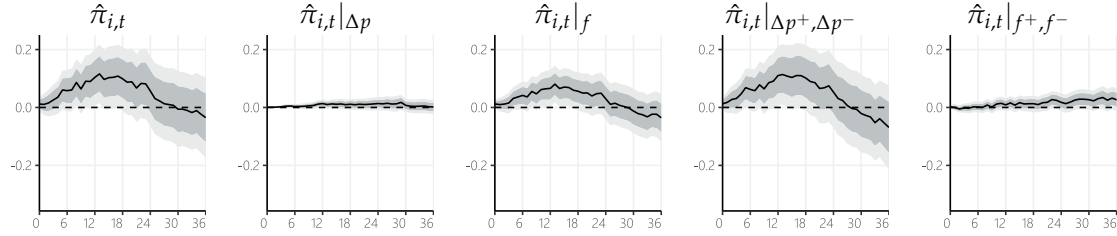
Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to aggregate shocks estimated using panel linear local projections and the sample of CPI microdata from January 2008 to December 2025 that excludes price changes due to temporary sales and includes price changes due to product substitutions. The models are specified in [Equation \(2\)](#). The rows represent the IRFs to the different shocks: oil supply news, safe haven, supply chain, and monetary policy. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|_f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+,\Delta p^-$ and $\hat{\pi}_{i,t}|_{f^+,f^-}$). The dark- and light-gray areas are the 68 and 90 percent confidence bands, respectively.

Figure E.6. Conditional responses of recomposed and counterfactual inflation rates to aggregate shocks from linear local projections, excluding price changes due to product substitutions

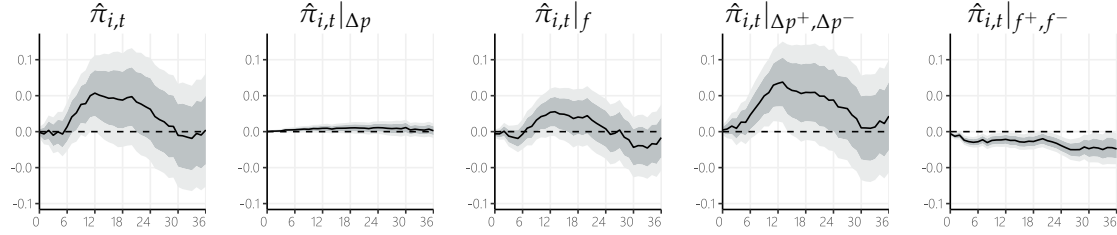
Oil supply news shocks



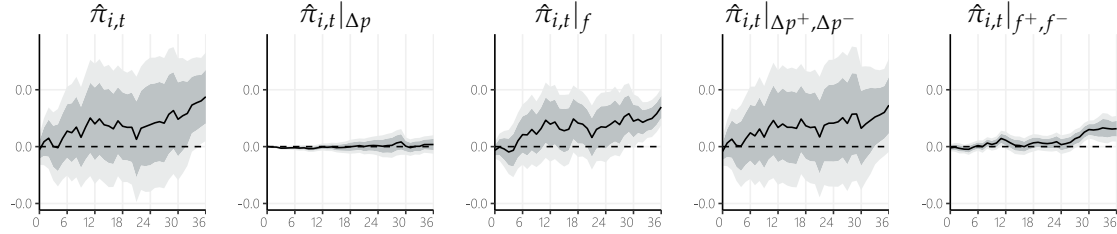
Swiss franc safe haven shocks



Supply chain shocks



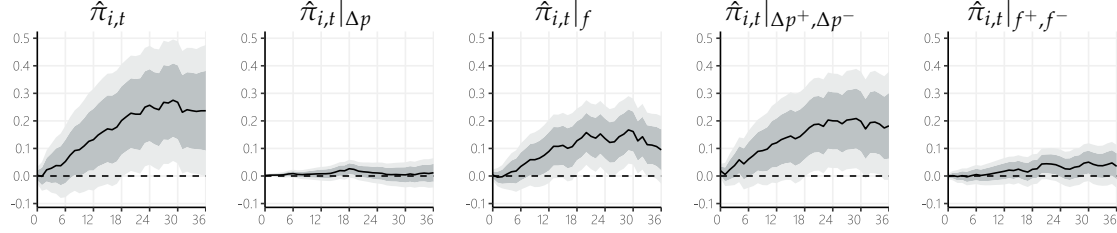
Monetary policy shocks



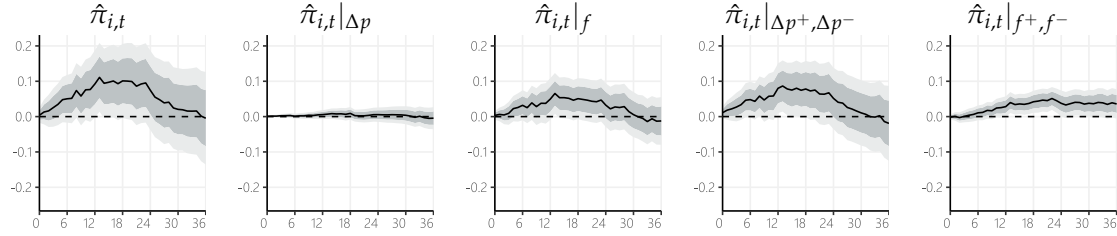
Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to aggregate shocks estimated using panel linear local projections and the sample of CPI microdata from January 2008 to December 2025 that includes price changes due to temporary sales and excludes price changes due to product substitutions. The models are specified in [Equation \(2\)](#). The rows represent the IRFs to the different shocks: oil supply news, safe haven, supply chain, and monetary policy. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|_f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+,\Delta p^-$ and $\hat{\pi}_{i,t}|_{f^+,f^-}$). The dark- and light-gray areas are the 68 and 90 percent confidence bands, respectively.

Figure E.7. Conditional responses of recomposed and counterfactual inflation rates to aggregate shocks from linear local projections, excluding price changes due to temporary sales and product substitutions

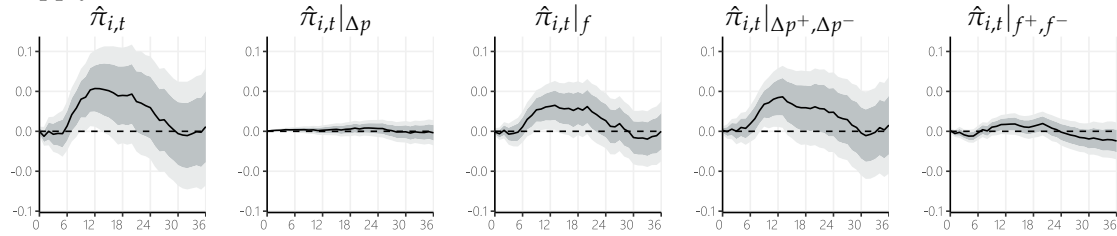
Oil supply news shocks



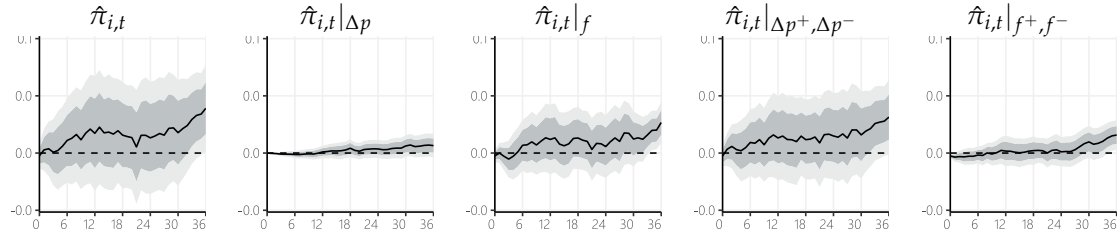
Swiss franc safe haven shocks



Supply chain shocks



Monetary policy shocks



Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to aggregate shocks estimated using panel linear local projections and the sample of CPI microdata from January 2008 to December 2025 that excludes price changes due to temporary sales and product substitutions. The models are specified in Equation (2). The rows represent the IRFs to the different shocks: oil supply news, safe haven, supply chain, and monetary policy. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|_f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ and $\hat{\pi}_{i,t}|_{f^+, f^-}$). The dark- and light-gray areas are the 68 and 90 percent confidence bands, respectively.

E.5 Robustness to alternative state variables

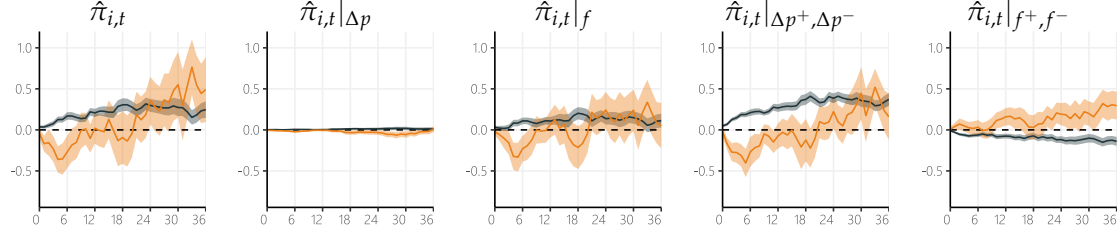
This section examines the robustness of the nonlinear local-projection results to alternative state variables. [Figure E.8](#) reports impulse response functions when regimes are defined using the frequency of price changes alone, while [Figure E.9](#) reports corresponding results using the kurtosis of standardized price changes as the state variable.

The qualitative finding from the baseline—that inflation responses are stronger and faster in the low-sufficient-statistic regime—is broadly replicated when the frequency alone is used as the state variable. For the oil supply news shock, the safe haven shock, and the monetary policy shock, the high-frequency regime produces more precisely estimated and larger responses than the low-frequency regime, consistent with the baseline result. The supply chain shock is an exception: when regimes are defined by frequency alone, both regimes show positive responses, with the high-frequency regime exhibiting a somewhat larger cumulated effect, qualitatively in line with the baseline.

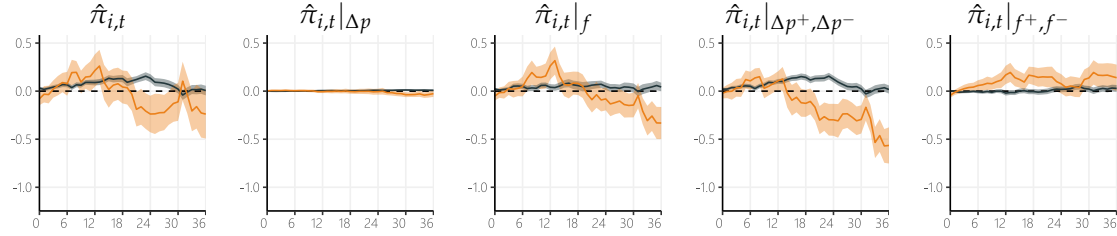
Results based on kurtosis alone are less uniform across shocks. For the monetary policy shock, a high-kurtosis state—associated with strong price selection—produces substantially larger responses than a low-kurtosis state, consistent with the baseline. For the oil supply news shock, the kurtosis-based results are also broadly aligned with the baseline. However, for the supply chain and safe haven shocks, the kurtosis-based results differ more markedly from the baseline: in these cases, the high-kurtosis regime produces responses of the opposite sign relative to the frequency-based and baseline results, suggesting that kurtosis alone provides a noisier regime indicator for these shock types. This is consistent with the theoretical motivation for the sufficient statistic as a ratio: kurtosis and frequency carry complementary information, and neither alone spans the full variation in price-setting regimes that their ratio captures.

Figure E.8. Conditional responses of recomposed and counterfactual inflation rates to aggregate shocks from nonlinear local projections, using the frequency of price changes as state variable

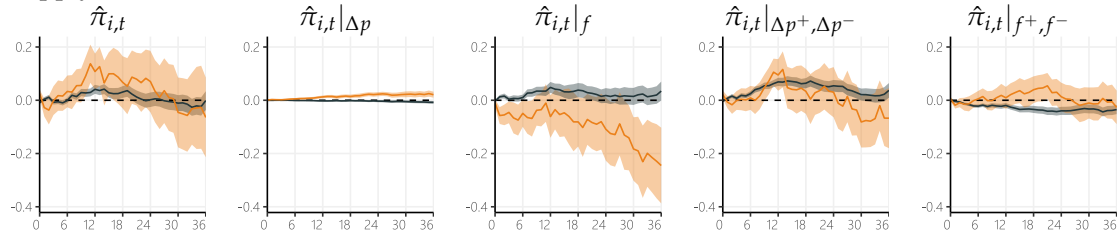
Oil supply news shocks



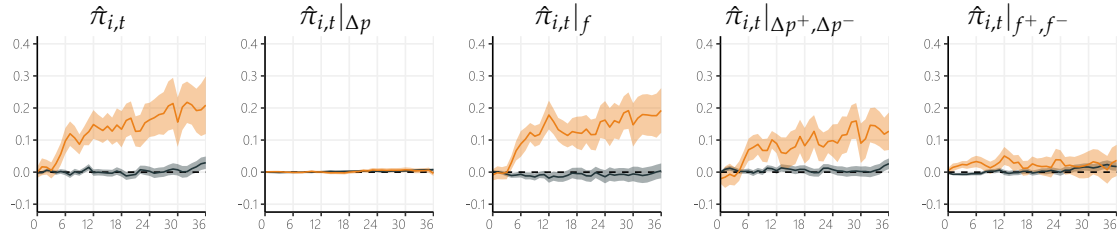
Swiss franc safe haven shocks



Supply chain shocks



Monetary policy shocks

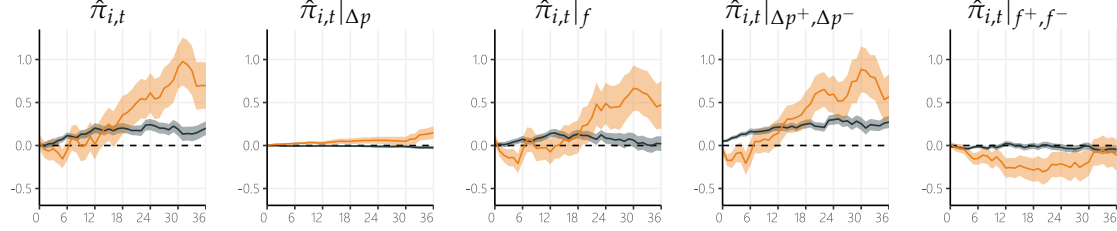


State variable ■ High frequency of price changes ■ Low frequency of price changes

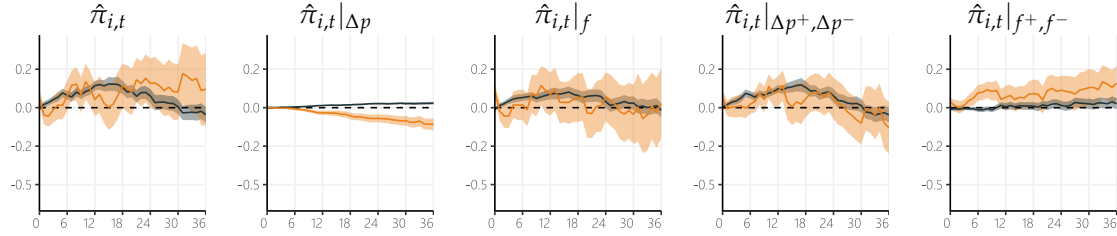
Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to aggregate shocks estimated using panel nonlinear local projections and the sample of CPI microdata from January 2008 to December 2025 that includes price changes due to temporary sales and product substitutions. The models are specified in Equation (4). The state variables are the item-level frequencies of price changes. The rows represent the IRFs to the different shocks: oil supply news, safe haven, supply chain, and monetary policy. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ and $\hat{\pi}_{i,t}|f^+, f^-$). The areas are the 68 percent confidence bands.

Figure E.9. Conditional responses of recomposed and counterfactual inflation rates to aggregate shocks from nonlinear local projections, using the kurtosis of standardized price changes as state variable

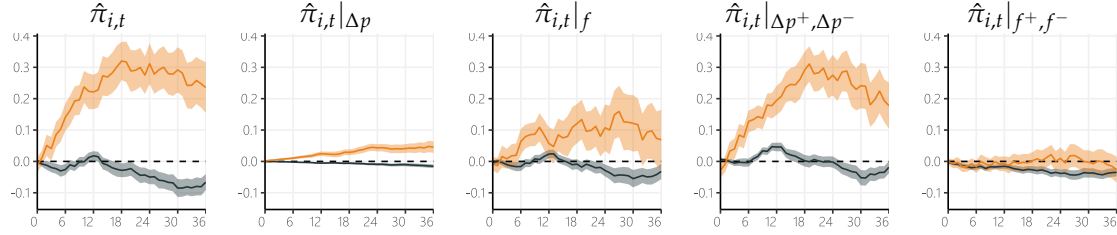
Oil supply news shocks



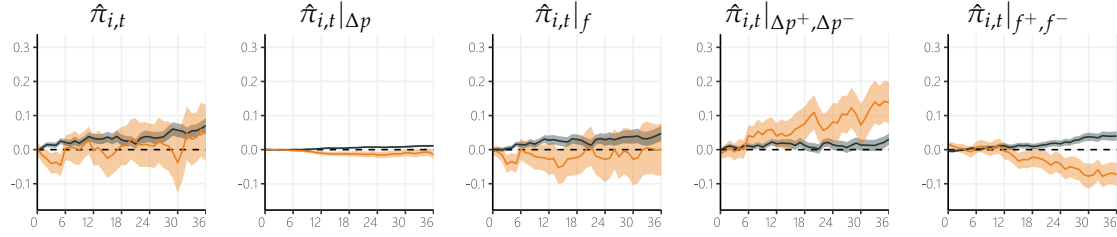
Swiss franc safe haven shocks



Supply chain shocks



Monetary policy shocks



State variable ■ High kurtosis of price changes ■ Low kurtosis of price changes

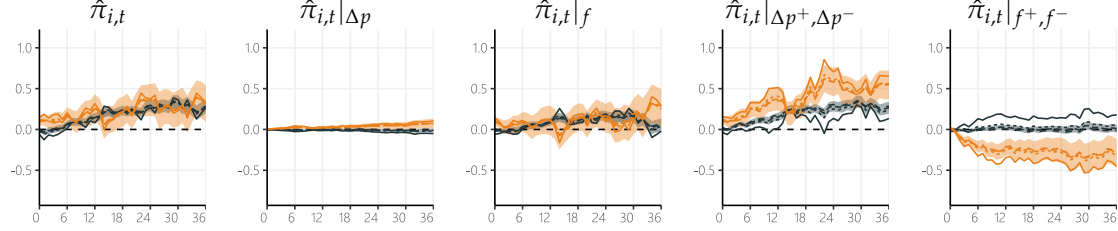
Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to aggregate shocks estimated using panel nonlinear local projections and the sample of CPI microdata from January 2008 to December 2025 that includes price changes due to temporary sales and product substitutions. The models are specified in Equation (4). The state variables are the item-level kurtosis of standardized price changes. The rows represent the IRFs to the different shocks: oil supply news, safe haven, supply chain, and monetary policy. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ and $\hat{\pi}_{i,t}|f^+, f^-$). The areas are the 68 percent confidence bands.

E.6 Robustness to alternative values of the transition-function intensity parameter

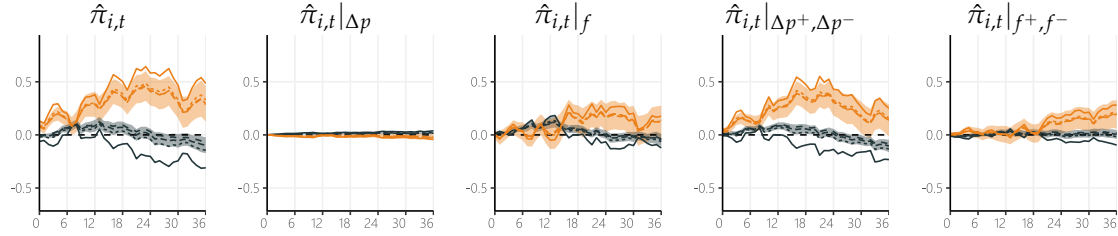
This section assesses the sensitivity of the nonlinear local-projection estimates to alternative values of the transition-function intensity parameter γ . [Figure E.10](#) shows impulse response functions estimated under looser and sharper regime switching than in the baseline specification. The IRFs are qualitatively similar regardless of the intensity of regime switching.

Figure E.10. Conditional responses of recomposed and counterfactual inflation rates to aggregate shocks from nonlinear local projections, with alternative values of the transition-function intensity parameter γ

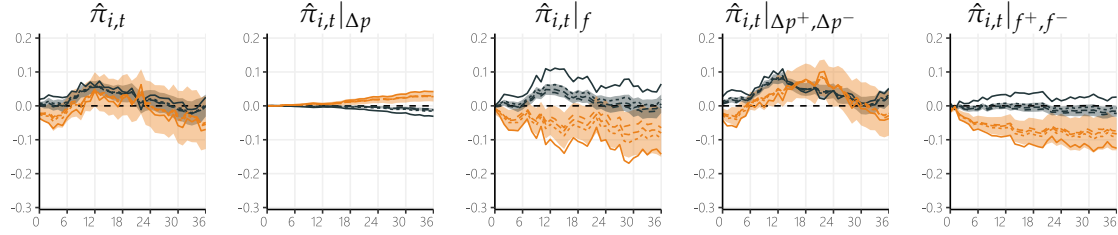
Oil supply news shocks



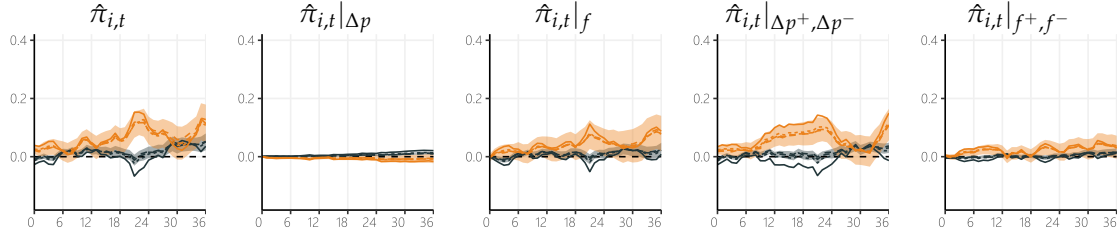
Swiss franc safe haven shocks



Supply chain shocks



Monetary policy shocks



γ — 1 — 2 — 3 — 5 ■ High sufficient statistic ■ Low sufficient statistic

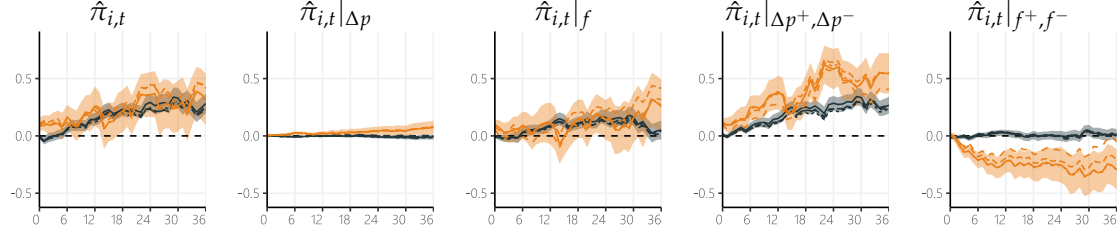
Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to aggregate shocks estimated using panel nonlinear local projections and the sample of CPI microdata from January 2008 to December 2025 that includes price changes due to temporary sales and product substitutions. The models are specified in Equation (4) and estimated with varying transition-function intensity parameters. The state variables are the item-level sufficient statistics calculated as in Equation (3). The rows represent the IRFs to the different shocks: oil supply news, safe haven, supply chain, and monetary policy. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ and $\hat{\pi}_{i,t}|f^+, f^-$). The areas are the 68 percent confidence bands.

E.7 Robustness to alternative lag structures

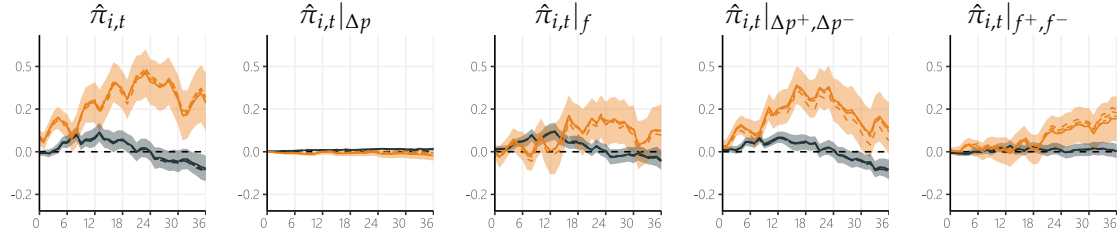
This section evaluates the robustness of the nonlinear local-projection results to alternative lag structures. [Figure E.11](#) reports impulse response functions obtained when including additional lags of the exogenous variables relative to the baseline specification. The IRFs are qualitatively similar regardless of the lag structure.

Figure E.11. Conditional responses of recomposed and counterfactual inflation rates to aggregate shocks from nonlinear local projections, with alternative lag structures

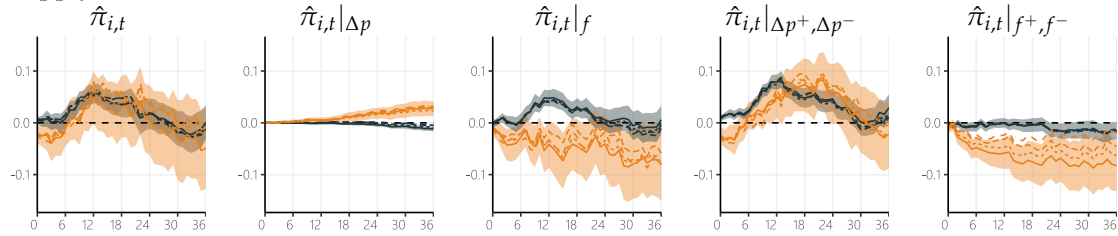
Oil supply news shocks



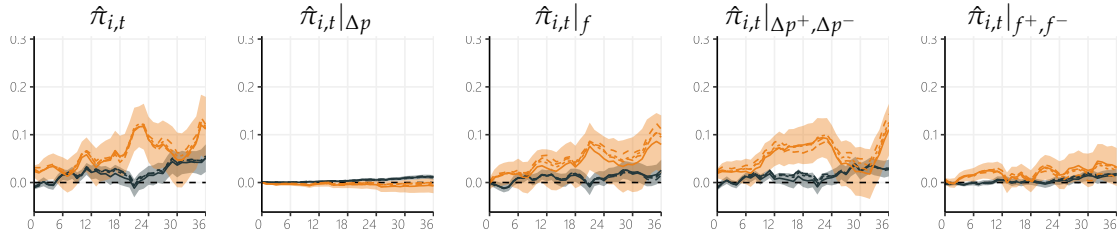
Swiss franc safe haven shocks



Supply chain shocks



Monetary policy shocks



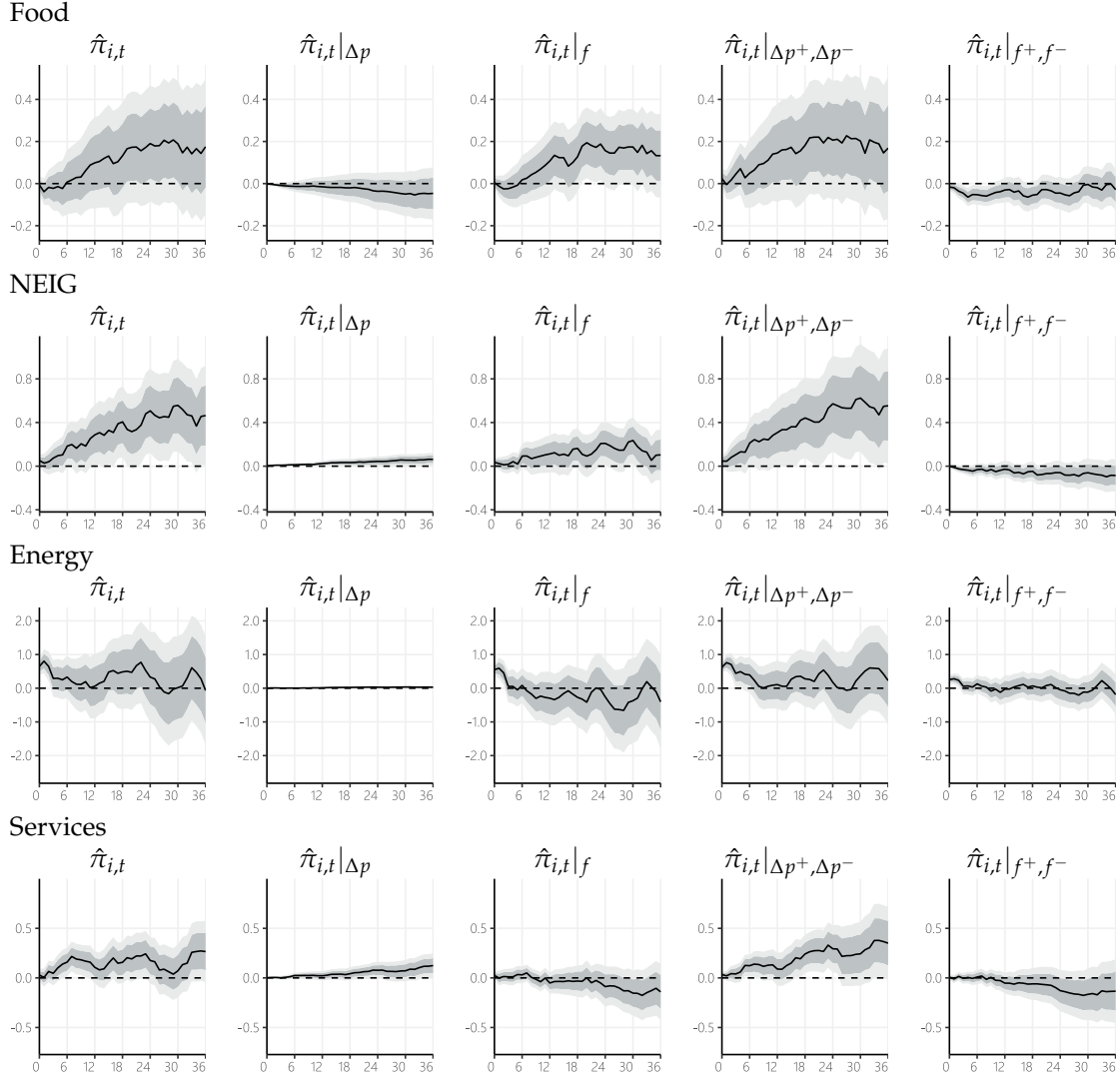
Lags — 1 -- 2 -- 4 - 6 ■ High sufficient statistic ■ Low sufficient statistic

Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to aggregate shocks estimated using panel nonlinear local projections and the sample of CPI microdata from January 2008 to December 2025 that includes price changes due to temporary sales and product substitutions. The models are specified in Equation (4) and estimated with varying lag structures. The state variables are the item-level sufficient statistics calculated as in Equation (3). The rows represent the IRFs to the different shocks: oil supply news, safe haven, supply chain, and monetary policy. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ and $\hat{\pi}_{i,t}|f^+, f^-$). The areas are the 68 percent confidence bands.

E.8 Cross-sectional heterogeneity

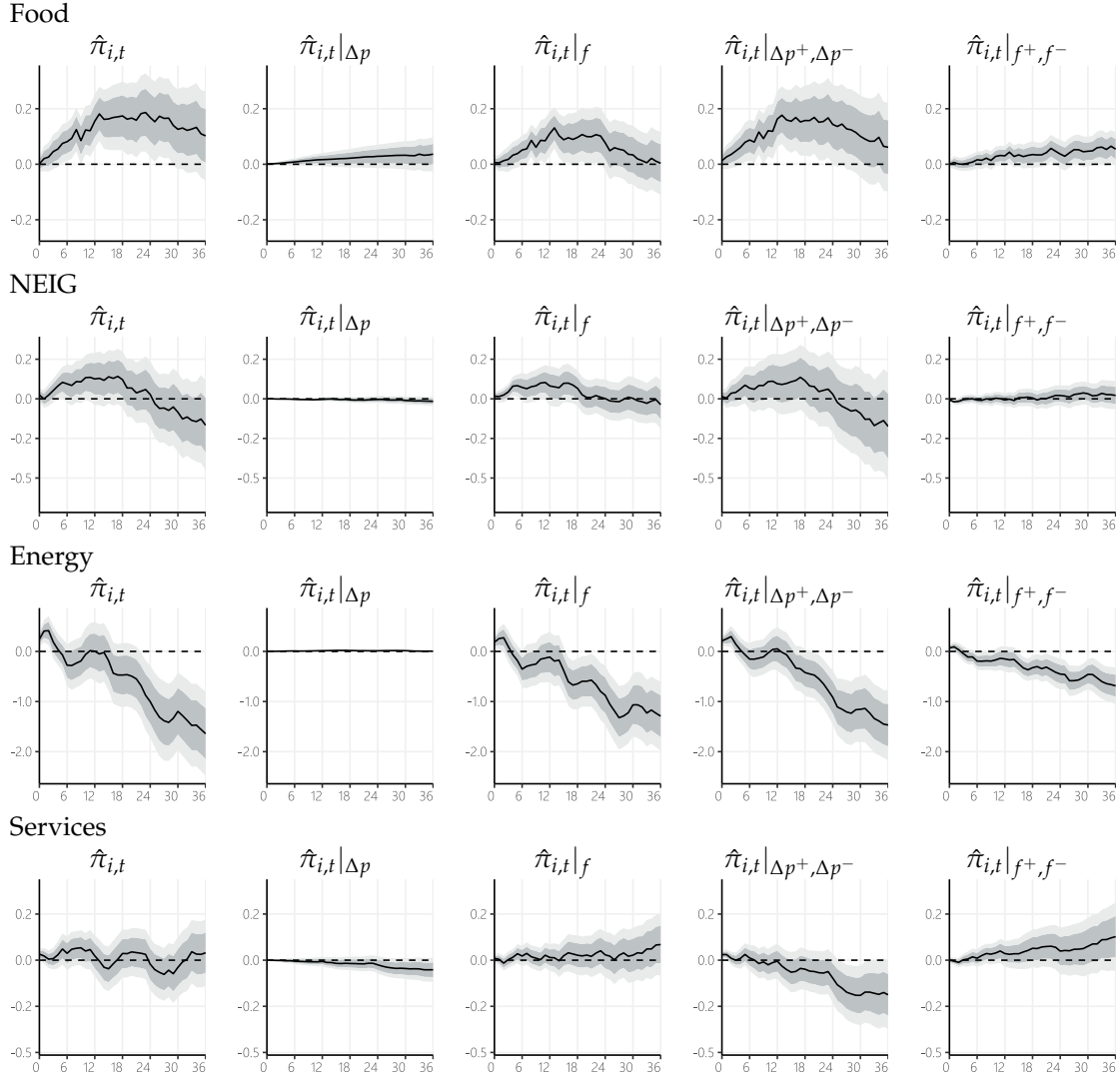
This section examines sectoral differences in the inflation responses to aggregate shocks. We consider four sectors: food, NEIG, energy, and services. [Figure E.12](#) shows the conditional responses of recomposed and counterfactual inflation rates to oil supply news shocks across sectors. [Figure E.13](#) presents the corresponding responses to Swiss franc safe-haven shocks, while [Figure E.14](#) and [Figure E.15](#) show the responses to supply chain and monetary policy shocks, respectively.

Figure E.12. Conditional responses of recomposed and counterfactual inflation rates to oil supply news shocks across sectors from linear local projections



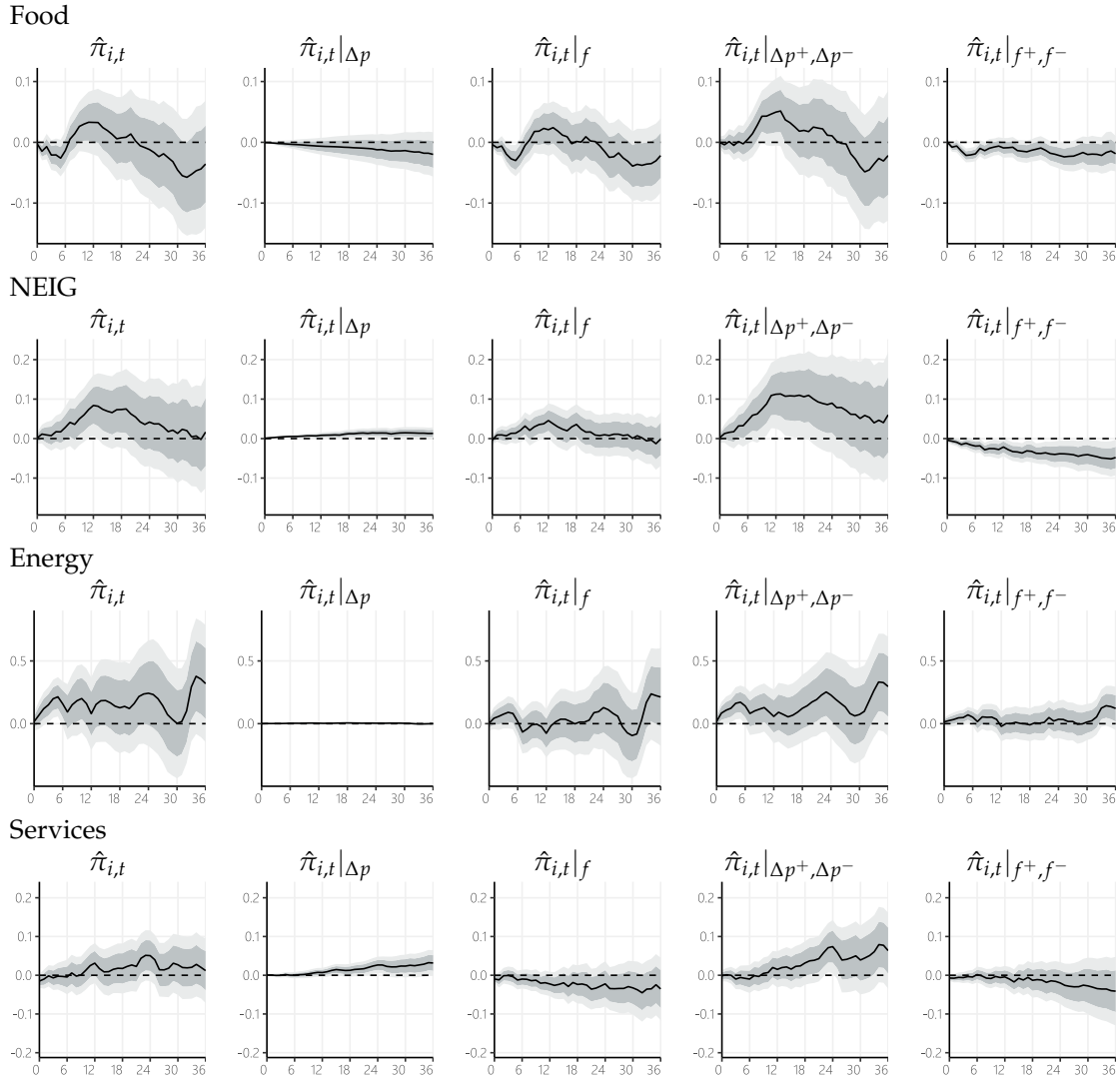
Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to oil supply news shocks across sectors estimated using panel linear local projections and the sample of CPI microdata from January 2008 to December 2025 that includes price changes due to temporary sales and product substitutions. The models are specified in Equation (2). The rows represent the IRFs across sectors: food, NEIG, energy, and services. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ and $\hat{\pi}_{i,t}|f^+, f^-$). The dark- and light-gray areas are the 68 and 90 percent confidence bands, respectively.

Figure E.13. Conditional responses of recomposed and counterfactual inflation rates to reversed Swiss franc safe haven shocks across sectors from linear local projections



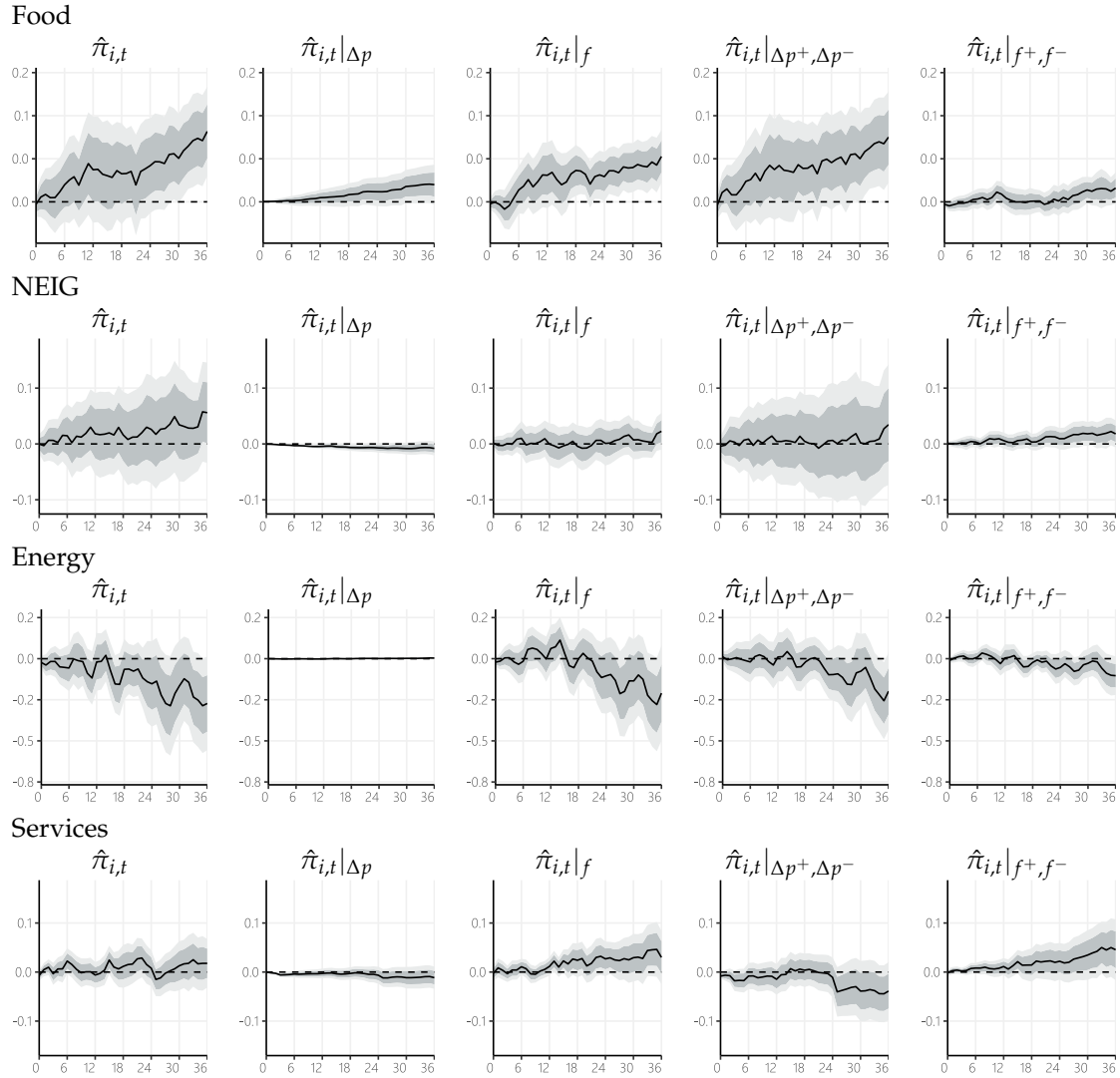
Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to reversed Swiss franc safe haven shocks across sectors estimated using panel linear local projections and the sample of CPI microdata from January 2008 to December 2025 that includes price changes due to temporary sales and product substitutions. The models are specified in Equation (2). The rows represent the IRFs across sectors: food, NEIG, energy, and services. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|_f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ and $\hat{\pi}_{i,t}|_{f^+, f^-}$). The dark- and light-gray areas are the 68 and 90 percent confidence bands, respectively.

Figure E.14. Conditional responses of recomposed and counterfactual inflation rates to supply chain shocks across sectors from linear local projections



Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to supply chain shocks across sectors estimated using panel linear local projections and the sample of CPI microdata from January 2008 to December 2025 that includes price changes due to temporary sales and product substitutions. The models are specified in [Equation \(2\)](#). The rows represent the IRFs across sectors: food, NEIG, energy, and services. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ and $\hat{\pi}_{i,t}|f^+, f^-$). The dark- and light-gray areas are the 68 and 90 percent confidence bands, respectively.

Figure E.15. Conditional responses of recomposed and counterfactual inflation rates to monetary policy shocks across sectors from linear local projections

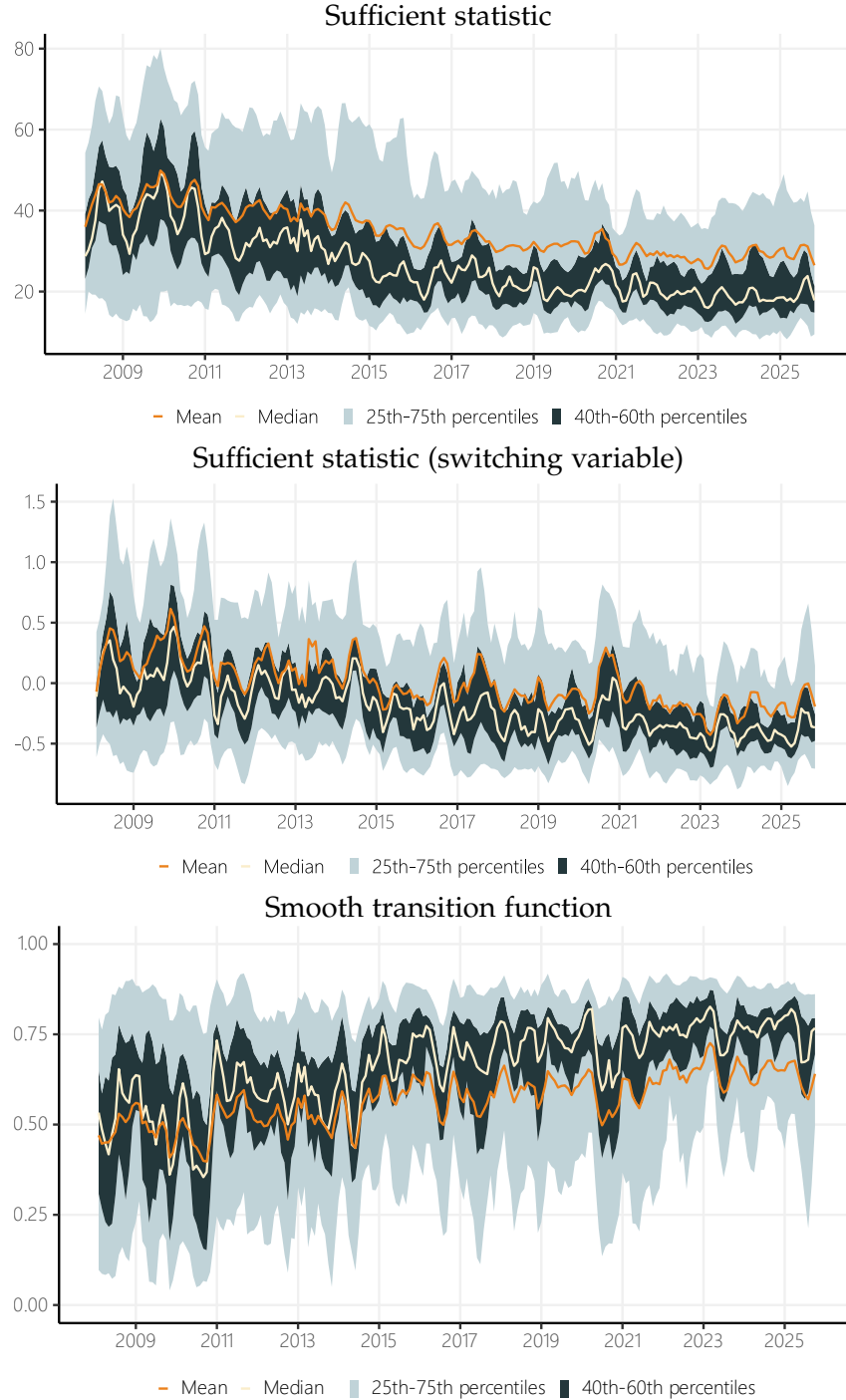


Notes: Impulse response functions (solid lines) of recomposed and counterfactual inflation rates to monetary policy shocks across sectors estimated using panel linear local projections and the sample of CPI microdata from January 2008 to December 2025 that includes price changes due to temporary sales and product substitutions. The models are specified in Equation (2). The rows represent the IRFs across sectors: food, NEIG, energy, and services. The columns correspond to recomposed inflation ($\hat{\pi}_{i,t}$) and counterfactual inflation rates: assuming constant size and frequency of price changes ($\hat{\pi}_{i,t}|\Delta p$ and $\hat{\pi}_{i,t}|f$), and constant sizes and frequencies of price increases and decreases ($\hat{\pi}_{i,t}|\Delta p^+, \Delta p^-$ and $\hat{\pi}_{i,t}|f^+, f^-$). The dark- and light-gray areas are the 68 and 90 percent confidence bands, respectively.

E.9 State variables and resulting smooth transition functions

Figure E.16 displays the distribution of the sufficient statistic $z_{i,t}$, its standardized counterpart used as the switching variable in the nonlinear local projections, and the resulting smooth transition function $F(z_{i,t})$, all aggregated across items using CPI expenditure weights.

Figure E.16. Distribution of smooth transition functions



Notes: The top panel shows the distribution of the sufficient statistic $z_{i,t} = \text{Kur}(\Delta p_{i,t}) / f_{i,t}$, as defined in Equation (3). The middle panel shows the switching variable, obtained by standardizing $z_{i,t}$ for each item by subtracting its mean $\mu_{i,z}$ and dividing by its standard deviation $\sigma_{i,z}$. The bottom panel shows the logistic smooth transition function $F(z_{i,t})$ defined in Equation (5), for which values close to zero (one) indicate periods of high (low) monetary non-neutrality, i.e., low (high) sufficient statistics. In all panels, moments are aggregated across items using CPI expenditure weights, plotted as three-month centered moving averages, and displayed as the mean (orange line), median (white line), 20th–40th percentile range (dark-shaded area), and interquartile range (light-shaded area). The parameterization uses $\gamma = 3$. Sample: January 2008 to December 2025, including price changes due to temporary sales and product substitutions.