

# How Firms Set Their Prices: Survey Evidence Along the Stages of Price Setting

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## Abstract

This paper presents novel survey evidence on how firms set prices across the private-sector Swiss economy. The survey covers all stages of the price-setting process and reveals substantial heterogeneity by sector, firm size, customer type, and sales channel. Firms combine time- and state-dependent elements when reviewing prices. Competitor-based pricing dominates over markup rules, and price discrimination is multidimensional and widespread. Price changes occur far less frequently than reviews, are typically synchronized within firms, and exhibit a slightly upward-sloping hazard of adjustment. Cost pass-through is driven mainly by labor, supplier, and raw material costs, with asymmetric responses to cost versus demand shocks. Price rigidity arises primarily from implicit and explicit contracts and cost-based pricing, while operational frictions such as menu costs play only a minor role.

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# 1 Introduction

Over the past two decades, a large empirical literature has transformed our understanding of firms' price-setting behavior.<sup>1</sup> Drawing on increasingly rich micro price datasets—such as consumer price index (CPI) and producer price index (PPI) microdata, scanner data, and web-scraped online prices—this research has documented the extent and patterns of nominal rigidities, informed structural models, and reshaped the microfoundations of macroeconomic theory.

Quantitative price data, however, have two inherent limitations. They capture only realized price changes, without revealing the mechanisms or rationales behind them, and they remain silent on other stages of price setting—such as how prices are reviewed, formed, or why adjustments are delayed—which are essential for interpreting rigidity and understanding responses to shocks. Surveys can address these gaps. By eliciting firms' reasoning and self-reported practices, they uncover qualitative dimensions—information sets, perceived constraints, strategic considerations—that leave no trace in transaction-level data, thereby complementing and deepening the insights from micro-price evidence.

This paper contributes to that effort by introducing the Price-Setting Survey (PSS, hereafter), developed and conducted in spring 2022 by the KOF Swiss Economic Institute at ETH Zurich. The PSS collected qualitative firm-level evidence from 1,555 private-sector companies across Switzerland, covering manufacturing, construction, retail, and other services, with an intentional oversampling of retail to capture consumer-facing pricing. Building on earlier surveys (e.g., [Blinder et al., 1998](#); [Fabiani et al., 2005](#); [Zurlinden, 2007](#)), the PSS expands sectoral coverage and introduces new dimensions such as distribution channels and the role of digitization. In addition, rich information on firm characteristics—including size, sector, customer base, and sales channels—allows for a detailed analysis of cross-sectional heterogeneity in pricing practices. By post-stratifying responses by industry and firm size using employment-based weights, the PSS corrects for sampling imbalances and ensures that aggregate results are representative of the Swiss private-sector economy—a key strength compared to studies limited to only part of the economy.

The PSS is designed to collect information on how companies set their prices

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<sup>1</sup>[Klenow and Malin \(2010\)](#), [Nakamura and Steinsson \(2013\)](#), [Luo and Villar \(2025\)](#) and [Dedola et al. \(2025\)](#) provide comprehensive reviews of micro-price studies and summarize the available evidence on firms' price-setting behavior.

and what factors influence their pricing decisions. The questionnaire comprised 32 questions structured around four stages of the price-setting process: (i) price review, (ii) price formation, (iii) price adjustment, and (iv) price rigidity. This structure enables a comprehensive analysis of the timing of reviews, the rules and information used in price formation, the frequency and synchronization of price changes, and the reasons for delaying adjustments.

The results provide a rich picture of the stages of price setting in Switzerland—complementing and extending the evidence from quantitative microdata—while uncovering considerable cross-sectional heterogeneity across sectors, firm sizes, customer types, and sales channels. Several broad patterns emerge.

First, firms combine time- and state-dependent elements when reviewing prices, with hybrid strategies far more common than purely calendar-based or event-driven rules. Furthermore, most firms base their pricing decisions on current developments in relevant variables, with roughly half also considering past or expected future developments.

Second, competitor prices dominate as a reference point for price formation, overtaking markup-based rules that featured prominently in earlier Swiss and international surveys. Price discrimination is widespread, especially personalized and quantity-based pricing, while automation remains modest but is gaining traction among large and online-oriented firms.

Third, price changes occur far less frequently than reviews, implying that most reviews lead to no adjustments. Most firms report that the likelihood of a price change does not depend on the age of the current price, although roughly one-quarter indicate that the probability rises with time since the last adjustment—consistent with an upward-sloping hazard function. Price changes tend to be synchronized within firms rather than across competitors. Cost pass-through is asymmetric: increases in labor, supplier, and raw material costs strongly trigger price hikes, whereas equivalent decreases rarely lead to cuts.

Finally, price rigidity stems primarily from implicit and explicit contracts and cost-based pricing. Sectoral patterns add nuance: psychological pricing thresholds matter most in retail, while coordination failure is relatively common in retail and manufacturing. By contrast, menu costs rank among the least important factors. In macroeconomic models, “menu costs” typically serve as a shortcut for a broad set of price-adjustment frictions—such as information, communication, and implementation costs. The PSS helps open this black box by providing di-

rect evidence that these operational frictions are minor compared with relational and strategic considerations, consistent with earlier attempts to quantify price-adjustment costs (e.g., [Levy et al., 1997, 1998](#)).

This paper contributes to the literature on survey evidence of firms' price-setting behavior, which was pioneered by the seminal studies of [Blinder \(1991, 1994\)](#) and [Blinder et al. \(1998\)](#) in the United States. Similar surveys were subsequently conducted, for example, in the United Kingdom ([Hall et al., 1997](#)), Sweden ([Apel et al., 2005](#)), and Canada ([Amirault et al., 2006](#)). For the euro area, survey evidence was systematically collected within the Eurosystem Inflation Persistence Network (IPN) across nine<sup>2</sup> member countries ([Fabiani et al., 2005](#)). More recently, [Morris and de Vincent-Humphreys \(2019\)](#) gathered responses from 58 leading non-financial companies operating across the euro area, providing some follow-up evidence. For Switzerland, [Zurlinden \(2007\)](#) offered early insights based on interviews with 67 private companies conducted by the delegates for regional economic relations of the Swiss National Bank.

The PSS underlying this paper builds on the design of these earlier surveys, enabling direct comparison across countries and over time. Beyond, it offers the first large-scale Swiss update in almost two decades, and expands the scope of previous work in several dimensions. First, the sectoral coverage goes beyond the manufacturing focus common in earlier studies. The PSS sample includes a large share of retail and service-sector firms, allowing conclusions to be drawn for both producer and consumer prices. Second, the survey links price-setting behavior to a rich set of firm characteristics, enabling a granular analysis of cross-sectional heterogeneity. In particular, it introduces the distribution channel as a novel dimension, making it possible to examine differences between online and offline pricing strategies. Third, the questionnaire includes new topics that have not been addressed in prior surveys, such as the degree of synchronization of price changes within and across firms, and the perceived impact of digitization on pricing.

Taken together, the PSS provides comprehensive and internationally comparable evidence on the price-setting behavior of Swiss firms, complementing both micro-

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<sup>2</sup>More detailed results for each of the nine euro area countries can be found in their respective country-specific studies: [Kwapil et al. \(2005\)](#) for Austria, [Aucremanne and Dhyne \(2004\)](#) for Belgium, [Loupias and Ricart \(2004\)](#) for France, [Stahl \(2005\)](#) for Germany, [Fabiani et al. \(2006\)](#) for Italy, [Lunnemann and Mathä \(2006\)](#) for Luxembourg, [Hoerberichts and Stokman \(2010\)](#) for the Netherlands, [Martins \(2005\)](#) for Portugal, and [Álvarez and Hernando \(2005\)](#) for Spain.

price datasets and macroeconomic analyses of inflation dynamics.

The remainder of this paper is organized as follows. [Section 2](#) presents the Price-Setting survey, including the sampling strategy and the questionnaire design of the survey. The following sections present the survey results along the four stages of the price-setting process: price review ([Section 3](#)), price formation ([Section 4](#)), price adjustment ([Section 5](#)), and price rigidity ([Section 6](#)). [Section 7](#) concludes.

## 2 The Price-Setting Survey: Capturing Firm Behavior along the Stages of Price Setting

This paper introduces the Price-Setting Survey (PSS, hereafter) and presents novel evidence on firm-level price-setting behavior across a broad spectrum of Swiss private-sector companies. The PSS was developed—drawing on established international survey frameworks—and conducted in spring 2022 by the KOF Swiss Economic Institute at ETH Zurich. It collects qualitative information on firms’ practices and motivations along the main stages of the price-setting process. This section describes the sampling strategy and questionnaire design of the survey, situates it in its macroeconomic context, and summarizes the key characteristics of participating firms.

### 2.1 Sample design

The PSS targeted private Swiss firms with at least two full-time equivalent (FTE) employees, excluding agriculture and public or non-profit services. The questionnaire was sent to a panel of firms that regularly participate in surveys administered by the KOF.<sup>3</sup> The underlying KOF survey panel is drawn using a stratified random sample by industry and firm size, ensuring systematic coverage of the Swiss economy. To increase representation of consumer-facing pricing practices, the retail sector was deliberately oversampled. This design yields broad sectoral coverage that surpasses most prior surveys on price-setting behavior, which have

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<sup>3</sup>Specifically, the sample draws on the panel used for the semi-annual KOF investment survey. This standardized survey has been conducted regularly for over two decades and gathers information on firms’ investment decisions and expectations. The panel covers nearly all private sectors in Switzerland, excluding agriculture, non-profit services, and some areas of general interest such as wastewater treatment. The panel is based on a stratified sample from the Business and Enterprise Register of the Swiss Federal Statistical Office, with strata defined by industry (NACE Rev. 2 division level) and firm size (measured in full-time equivalents employees). Panel participation has remained stable over time, with new firms added periodically to compensate for attrition.

typically focused narrowly on manufacturing or selected service sectors (e.g., [Blinder et al., 1998](#); [Fabiani et al., 2005](#)). By including firms from a wide range of industries—particularly in retail and other consumer-facing sectors—the survey captures both producer and consumer pricing perspectives and allows for a comprehensive analysis of price-setting behavior across the economy.

A total of 5,551 firms were invited via email to complete the online questionnaire (available in German, French, Italian, and English) between 16 February and 1 April 2022. 1,555 firms participated, yielding a response rate of 28 percent.<sup>4</sup> Respondents are predominantly senior decision-makers within their firms. Over 70 percent are executive board members, and 60 percent are employed in their firms’ management divisions (see [Table A.1](#) in [Online Appendix A](#) for detailed information on the respondents’ roles within their organizations and the division they work in). This high-level respondent base increases confidence that answers reflect informed perspectives on pricing decisions ([Candia et al., 2024](#); [Savignac et al., 2024](#)).

[Table A.2](#) in [Online Appendix A](#) presents the sectoral and size coverage of the net sample. About 30 percent of respondents are from manufacturing, and around 25 percent operate in wholesale or retail. By size, 60 percent of the respondents are small firms (employing fewer than 50 employees), 28 percent are medium-sized (50–249 employees), and 14 percent are large firms (employing 250 and more employees). Compared to the overall structure of the Swiss economy, large firms and manufacturers are somewhat overrepresented, while small firms and service providers are underrepresented.

To address these imbalances, responses are post-stratified by industry and firm size using FTE employment weights. Within industries, firm-level responses are aggregated using each firm’s FTE count; across industries, sector-level aggregates are weighted by each industry’s share of total employment in the Swiss economy. As a result, all aggregate statistics are representative of the Swiss private-sector economy in terms of employment coverage, despite deviations of the net sample

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<sup>4</sup>Restricting the sample to firms that are part of the existing, voluntary KOF survey panel increases the response rate to 38 percent. To assess potential non-response bias, I compare respondents and non-respondents across industry, firm size, region, and language region for both the full sample and the panel-only sample. As shown in [Table A.3](#) in [Online Appendix A](#), the distributions are very similar within the established KOF panel, indicating that non-response in this core population is not systematically related to observable firm characteristics. The deviations in the full sample are primarily driven by the deliberate oversampling of retail firms, which naturally exhibit lower participation.

from the population structure. They can therefore be interpreted as reflecting economy-wide price-setting behavior, which is a key strength of the survey design compared to studies that focus on specific subsectors or rely on data from only part of the economy. A detailed profile of the responding firms, including size, sector, customer orientation, and sales channels, is provided in [Table A.4](#) in [Online Appendix A](#).

## 2.2 Survey design

The PSS is designed to collect qualitative information on firms' price-setting behavior across the different stages of the price-adjustment process. The questionnaire captures decision-making at multiple points—from the review of prices, to the formation of pricing decisions, the implementation of changes, and the factors underlying price rigidity.

The PSS comprised 32 questions in total.<sup>5</sup> Several questions were adapted from earlier price-setting surveys conducted by [Blinder et al. \(1998\)](#) in the United States and [Fabiani et al. \(2005\)](#) in the euro area, allowing for direct comparison to international evidence. Additional questions were developed to investigate novel aspects of firms' pricing practices, such as the impact of digitization on pricing practices, the synchronization of price changes, the behavior of online prices, or alternative explanations for price rigidities.

The questionnaire was organized into four sections, each reflecting a different stage of the price-setting process. The first section focused on the price review stage, in which firms assess whether to adjust their prices. Respondents were asked about the periodicity of price reviews and the factors that prompt them to consider an adjustment. The second section examined price formation and the information used in setting prices, covering how firms calculate prices or the extent to which they engage in price discrimination. The third section explored the execution of actual price adjustments, documenting how often firms change prices, the degree of synchronization of price changes within and across firms, and the main drivers of both price increases and decreases. The fourth and final section explored price rigidity—that is, the reasons why firms refrain from adjusting prices. Here, respondents evaluated a range of potential obstacles to price adjustments derived from established theories—such as implicit and explicit contracts,

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<sup>5</sup>[Online Appendix A](#) provides the English version of the questionnaire.

cost-based pricing rules, and coordination failure—as well as newer considerations, including uncertainty.

Throughout the survey, the price of a product or service referred to the actual transaction price rather than the list price. In sectors where list prices are commonly discounted, this referred to the after-discount price. For services or customized products, the price referred to the hourly or daily rate charged for labor input. Given that most firms sell multiple products or services, respondents were asked to base their answers on their main product or service, or one that is representative of their portfolio.

### 2.3 Macroeconomic environment during the survey

The PSS was fielded from mid-February to early April 2022, amid renewed inflationary pressures, continued monetary easing by the Swiss National Bank (SNB), and heightened geopolitical uncertainty.

At the time of the survey, the SNB maintained its policy rate at  $-0.75$  percent, extending a long-standing negative interest rate regime to counter Swiss franc appreciation. Inflation had shifted from pandemic-era deflation ( $-1.3$  percent in June 2020) to  $2.2$  percent in February and  $2.3$  percent in March 2022—slightly above the SNB’s  $0$ – $2$  percent target range.

Economic growth was moderate but stable: after contracting by  $-2.3$  percent in 2020 and rebounding by  $5.6$  percent in 2021, real GDP was projected to grow by  $2.9$  percent in 2022 and  $2.3$  percent in 2023 (Sturm et al., 2022).

This environment—recovering inflation, accommodative policy, and moderate expansion—framed firms’ price-setting behavior in the PSS. At the same time, the outbreak of the war in Ukraine in late February 2022 amplified uncertainty around inflation and policy paths.<sup>6</sup>

## 3 Stage 1: Price Review

The first stage of the price adjustment process concerns the decision to review prices—that is, to assess whether the current price remains appropriate or should

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<sup>6</sup>Seiler (2025) uses a quasi-experimental design within the PSS to study the causal effects of the Russian invasion on firms’ price-setting behavior. Similarly, Seiler (2022) shows that the war increased firms’ longer-term inflation expectations.

be changed. This section examines when Swiss firms review their prices and how frequently they do so, based on evidence from the PSS.

### 3.1 When do firms review their prices?

Economic theory distinguishes between two broad approaches to price review. One is time-dependent review, where firms check prices at regular intervals regardless of market conditions, as in models of inattentiveness (e.g., [Reis, 2006](#)) or frameworks with exogenous review schedules akin to deterministic or stochastic adjustment models ([Taylor, 1980](#); [Calvo, 1983](#)). The other is state-dependent review, where checks occur in response to specific shocks—such as large cost changes—often motivated by the costs of acquiring and processing information (e.g., [Woodford, 2009](#); [Álvarez et al., 2018](#)). These costs create frictions that make firms selective about when to update their information set, even before considering actual price changes.

The survey asked firms whether they review prices at regular time intervals (i.e., time-dependent pricing), in response to specific events (i.e., state-dependent pricing), or in both ways. [Table 1](#) presents the percentage of firms that responded in each way, overall and by firm characteristics: size, sector, customer, and channel.

Table 1. Time-dependent versus state-dependent pricing rules

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Time-dependent	33.8	34.4	33.4	34.0	20.0	39.2	39.7	21.2	50.2	37.4	24.6
State-dependent	14.0	16.1	17.8	11.3	15.5	4.1	15.1	17.1	14.4	10.4	29.0
Both	52.2	49.5	48.8	54.7	64.5	56.6	45.2	61.7	35.4	52.2	46.4

*Notes:* This table shows the percentage of companies that review (without necessarily change) the price of their main product or service at regular time intervals (“time-dependent”), in response to specific events (“state-dependent”) or “both.” The options are mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

Swiss firms employ a mix of both time- and state-dependent price review strategies. Just over half (52%) combine both approaches, about one-third (34%) rely solely on time-dependent reviews, and a much smaller share (14%) review prices exclusively in response to shocks. Thus, pricing approaches that include a time-dependent component are far more prevalent than purely state-dependent rules. These findings align with earlier Swiss evidence from [Zurlinden \(2007\)](#), who

reported that most firms reviewed prices at regular intervals and roughly one-quarter reacted only to specific events, and are broadly consistent with euro area (Fabiani et al., 2005) and U.S. (Blinder et al., 1998) results.

Patterns vary substantially across firm characteristics. By firm size, state-dependent rules are more common among small (16%) and medium-sized firms (18%) than among large firms (11%). By sector, purely time-dependent rules are more common in retail (39%) and services (40%) than in manufacturing (20%). State-dependent rules, in contrast, are most frequent in manufacturing and services (up to 16%) but rare in retail (4%). Customer type exhibits one of the clearest differences: firms serving primarily private consumers (B2C) rely heavily on time-dependent reviews (50%), whereas B2B firms are more likely to combine both approaches (62%) and rarely use purely time-dependent rules (21%). Pricing strategies also differ by sales channel. Firms with predominantly offline sales are more likely to employ state-dependent pricing (29%) than firms with substantial online sales, among which only 10% follow this approach. Conversely, purely time-dependent rules are more prevalent among online-oriented firms (37%) than offline-oriented firms (25%).

From a theoretical perspective, these patterns can imply different price-setting dynamics: under purely state-dependent rules, large shocks can trigger immediate price changes, whereas purely time-dependent firms wait until the next scheduled review—potentially resulting in greater nominal rigidity.

### 3.2 How often do firms review their prices?

The PSS also asked firms how often they review the prices of their main product or service, even if no change is ultimately made. Respondents could choose from several categories: intradaily, daily, weekly, monthly, quarterly, semi-annually, and yearly. In addition to reporting these categorical shares in Table 2, I convert them into an implied<sup>7</sup> monthly frequency of price reviews.

Most Swiss firms review their prices relatively infrequently: 43% do so yearly, and only 27% review monthly or more often. This figure is very similar to the 26%

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<sup>7</sup>To calculate the implied monthly frequency of price reviews from the temporal answer categories, I assign each category a review probability per month and sum over the weighted shares. The specific mapping is: intradaily = 1, daily = 1, weekly = 1, monthly = 1, quarterly =  $\frac{1}{3}$ , semi-annually =  $\frac{1}{6}$ , yearly =  $\frac{1}{12}$ . This treats any category from monthly to intradaily as implying at least one review per month. Thus, the resulting frequency is a lower bound of the true monthly frequency of price review.

Table 2. Frequency of price reviews

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Intradaily	1.9	0.6	3.1	1.5	0.1	1.6	1.3	1.5	0.8	1.4	4.5
Daily	4.1	7.1	4.4	3.4	3.7	1.3	4.1	4.4	4.4	3.6	5.8
Weekly	6.0	6.1	4.4	6.9	6.1	50.7	3.0	5.0	5.7	5.0	5.7
Monthly	17.0	19.6	16.4	16.9	21.8	9.5	15.2	15.3	19.6	19.1	11.8
Quarterly	15.7	13.6	15.8	16.0	22.7	23.1	14.1	20.2	12.2	14.5	12.1
Semi-annually	12.0	13.4	9.8	12.9	13.5	4.7	13.3	13.1	13.0	13.4	10.1
Yearly	43.3	39.7	46.2	42.4	32.1	9.1	49.0	40.6	44.2	43.0	50.2
Frequency (mean)	39.9	43.4	39.0	39.7	44.2	72.3	34.6	38.4	40.5	39.8	37.5
Frequency (median)	16.7	16.7	16.7	16.7	33.3	100.0	16.7	16.7	16.7	16.7	8.3

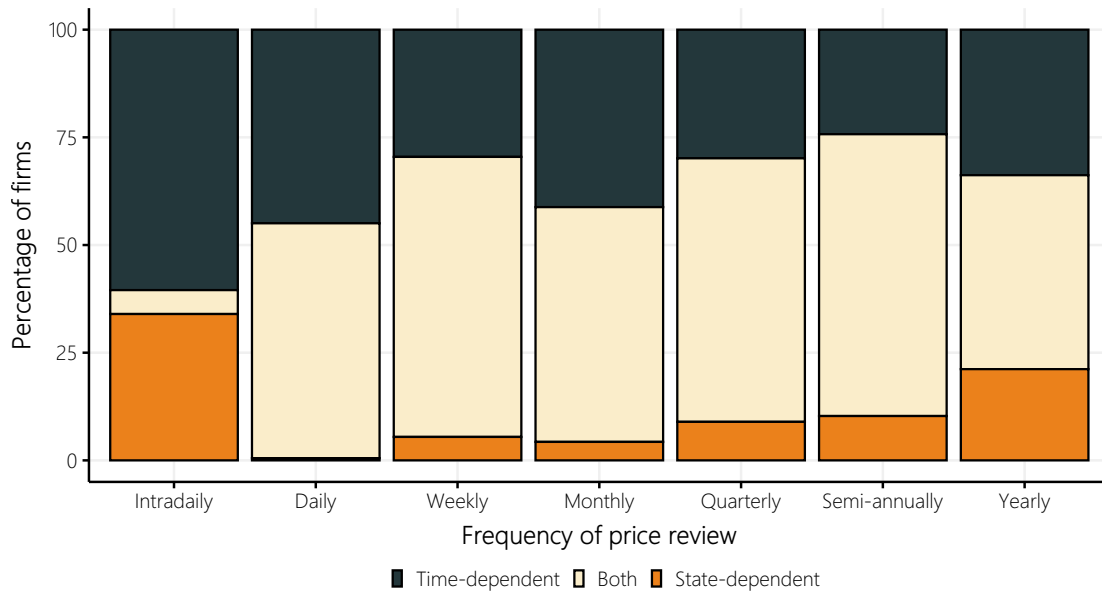
*Notes:* This table shows the percentage of companies that review (without necessarily change) the price of their main product or service several times a day (“intradaily”), “daily,” “weekly,” “monthly,” “quarterly,” “semi-annually,” or “yearly.” The bottom row shows the implied monthly frequency of price reviews. The options are mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

of companies in the euro area that review their prices at least twelve times per year (Fabiani et al., 2005). The implied monthly frequency for the average firm is 0.40 reviews per month (about five reviews per year), while the median firm reviews prices only every six month (16.7%). The relatively low review frequency may reflect the sporadic arrival of relevant information or costs associated with conducting a review. In the presence of information costs, firms may optimally choose not to obtain or process new information continuously. Section 6 explores the reasons for delaying price changes in more detail.

Sectoral differences in price reviews are pronounced. Retailers review prices most often, with a median quarterly review and an implied monthly frequency of 72.3 percent. The median manufacturers review prices semi-annually, and service providers yearly. Prices of products or services sold directly to consumers are reviewed more frequently than those sold primarily to other businesses. Firm size has little effect on review frequency. Price review patterns also differ across sales channels, though not always in the expected direction. Firms with substantial online sales are more likely than offline-oriented firms to review prices at extremely short intervals—such as intradaily or daily. Yet, their implied monthly review frequency (38%) is actually lower than that of offline-oriented firms (40%). To conclude this investigation of price reviews, I examine whether review frequency is systematically related to the rules firms use for reviewing prices. Figure 1 shows the distribution of review rules across review-frequency categories.

The modal response in all bins—except for firms reviewing prices at an intradaily frequency—is “both” time- and state-dependent. Some systematic differences emerge: among firms that review prices daily, 45% report time-dependent rules, compared to 41% among monthly reviewers and only 24% among semi-annual reviewers. Conversely, state-dependence rises with longer intervals, reaching 21% among firms that review yearly. These patterns suggest that firms with longer duration between reviews are not more time-dependent; if anything, they lean slightly more toward state-dependent behavior.

Figure 1. Time-dependent versus state-dependent pricing by review frequency



*Notes:* This figure shows, for each review-frequency category (intradaily, daily, weekly, monthly, quarterly, semi-annually, yearly), the weighted share of firms reporting time-dependent, state-dependent, or mixed (“both”) rules for price reviews.

## 4 Stage 2: Price Formation

This section examines the second stage of the price adjustment process: how firms recalculate their prices. It focuses on the information firms use when setting prices, the rules and strategies they apply for price calculation, the extent to which prices for the same product or service differ along various dimensions, and the degree of automation in the price-setting process.

#### 4.1 What information do firms use when setting prices?

The type of information firms incorporate into their pricing decisions has important implications for the responsiveness of prices to shocks. If pricing decisions are predominantly informed by backward-looking data—such as historical costs or past demand—price adjustments may lag behind shifts in market conditions. By contrast, firms that adopt a forward-looking approach—incorporating expectations about future developments—may be more likely to adjust prices swiftly and efficiently in response to changing economic environments.

Table 3. Information set for pricing decisions

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Past information	48.6	49.0	47.4	49.3	41.7	41.4	48.3	51.5	41.3	45.4	56.8
Present information	62.7	66.4	67.1	59.5	70.5	76.2	58.3	69.9	54.5	58.7	74.7
Future information	51.7	56.9	51.5	50.9	64.0	60.6	51.4	55.0	51.2	47.5	62.7

*Notes:* This table shows the percentage of companies for which the statement is fully or rather applicable to determine the price of their main product or service based on information about the past behavior (“past information”), the current behavior (“present information”) or the future expected behavior (“future information”) of all variables relevant for price determination. The options are not mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

On average, nearly two-thirds of Swiss firms rely on information about current conditions when setting prices (Table 3). Past and expected future information are used by roughly half of all firms (49% and 52%, respectively). Combinations of these dimensions are common: about one-quarter of firms rely on a single type of information (11% past only, 9% present only, 6% future only), while three-quarters use two or more. The most frequent combination is past, present, and future together (36%), followed by present and future (23%) and past and present (13%). This hybrid nature of pricing strategies lends empirical support to hybrid variants of the New Keynesian Phillips curve, according to which current inflation depends both on past and expected future inflation (Galí and Gertler, 1999).

Differences across firm characteristics are notable. Small firms tend to be more forward-looking than large firms: 57% of them consider expected future developments when setting prices, compared with 51% for medium-sized and 51% for large firms. This contrasts with their reliance on past information, which is roughly the same as for large firms (about 49%).

Sectoral patterns are even more pronounced. Manufacturing firms frequently consider both current (71%) and future (64%) information, suggesting a relatively balanced approach. Retailers, by contrast, place heavy weight on present conditions (76%) but less on past (41%) or future (61%) information, indicating a more reactive and less historically anchored strategy.

Customer orientation also matters. Firms selling primarily to other businesses (B2B) rely more on present information (70%) than B2C firms (55%), but they also consider past and future information more evenly (52% and 55%, respectively). B2C firms, in turn, show a noticeably lower reliance on past information (41%), suggesting a stronger emphasis on immediate and forward-looking factors in consumer markets.

Patterns by sales channel are consistent with differences in the frequency of price reviews (Table 2) and changes (Table 7). Online-oriented firms place greater importance on both past and present information (57% and 75%, respectively) than offline-oriented firms (45% and 59%). Future information is also more salient for online firms (63% vs. 48%), perhaps reflecting greater exposure to rapidly changing market conditions and competitive dynamics.

## 4.2 How do firms calculate prices?

Roughly one-third of all firms follow a self-determined pricing policy, while another 45% determine prices through negotiations with customers (Table 4). Negotiation plays a particularly large role in manufacturing (59%) and B2B relationships (58%), but is rare in retail, where supplier contracts matter more. Government regulation is reported by 15% of firms—mainly in administrative services—and 4% are bound by prices set by a parent company. Smaller firms are notably more independent in price setting than medium-sized or large firms. Online-oriented firms also show greater autonomy: 52% of them set prices independently, compared with 26% of offline-oriented firms, reflecting the reduced role of customer negotiations and supplier contracts in digital sales channels.

Firms with self-determined pricing policy were asked to describe their pricing methods and rate the applicability of several pricing rules to their company. These rules included rule-of-thumb pricing (e.g., indexation to the consumer price index), setting prices as a margin on costs (distinguishing between constant and variable markups), setting prices as a function of competitors' prices, and determining prices based on the perceived value customers derive from purchasing the

Table 4. Price-setting decision

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Company itself	33.4	46.2	36.0	29.5	32.4	73.2	35.4	29.4	42.6	26.3	51.6
With customers	44.5	37.7	41.7	47.4	58.5	3.5	36.6	57.6	23.5	48.6	31.4
With suppliers	3.7	9.0	4.0	2.6	0.6	3.7	5.0	5.8	1.9	3.5	5.6
Parent company	3.5	4.1	2.8	3.8	4.7	17.4	3.2	5.3	2.5	4.6	0.7
Government	14.9	3.0	15.6	16.7	3.9	2.2	19.7	1.8	29.5	17.1	10.6

*Notes:* This table shows the percentage of companies that determine their price of their main product or service themselves (“company itself”), whose price is determined through negotiations/contracts with the customers (“with customers”) or with the suppliers (“with suppliers”), or whose price is determined by the “parent company” or the “government.” The options are mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

main product or service.

Table 5. Price-setting rules

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Rule-of-thumb	26.4	18.9	25.0	28.6	20.2	30.1	25.6	31.0	22.1	26.8	29.4
Constant markup	38.4	44.7	47.0	32.3	46.5	50.6	35.1	42.4	29.5	35.0	48.2
Variable markup	44.8	50.2	45.3	43.3	64.8	35.7	38.4	55.4	30.5	41.1	51.7
Competitors’ prices	62.7	64.5	65.1	61.1	63.7	72.8	62.6	65.4	57.5	61.1	63.0
Value-based pricing	55.4	60.6	55.9	54.1	58.8	69.3	55.5	60.8	44.4	50.5	72.5

*Notes:* This table shows the percentage of companies for which the statement is fully or rather applicable to determine the price of their main product or service using rules of thumb (“rule-of-thumb”), by adding a constant markup on calculated unit costs (“constant markup”), by adding a variable markup on calculated unit costs depending on market conditions (“variable markup”), by considering the prices of their competitors (“competitors’ prices”) or by considering customer demand and the perceived value customers derive from purchasing their main product or service (“value-based pricing”). The options are not mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

Among firms with autonomous pricing authority, competitor prices are by far the most common benchmark, used by 63% of respondents (Table 5). This represents a shift compared to earlier evidence (Zurlinden, 2007), where markup pricing dominated, and likely reflects the increased market transparency and competitive pressures associated with digitization and price-comparison tools. Competitor-based pricing is particularly prominent in retail (73%) and in online channels, where it is the single most important rule (63%). By contrast, offline-oriented firms more often base prices on perceived customer value.

Value-based pricing ranks second overall (55%) and is most prevalent among small firms (61%) and in retail (69%). This pattern suggests that firms closer to end consumers may put greater emphasis on willingness-to-pay considerations, whereas business-to-business pricing is more frequently grounded in cost or competitor references.

Manufacturing firms stand out for their reliance on markup pricing. Variable markups are used by nearly two-thirds (65%) of manufacturers, making it their dominant rule, while constant markups are reported by 47%. Across most firm types, variable markups are more common than constant markups—except in retail, where the reverse holds.

Finally, rule-of-thumb approaches, such as simple indexation to an aggregate price index, are relatively rare (26%) and are most common in B2B contexts, where contractual arrangements and longer price duration may make simple formula-based updates more feasible.

### 4.3 Are there different prices for the same product or service?

Price discrimination is a pricing strategy in which customers pay different prices for the same product or service. Price discrimination can take many forms: Prices may vary by geographical region, by the customer, by quantity sold, by distribution channel, or by the time of the day the product or service is sold.

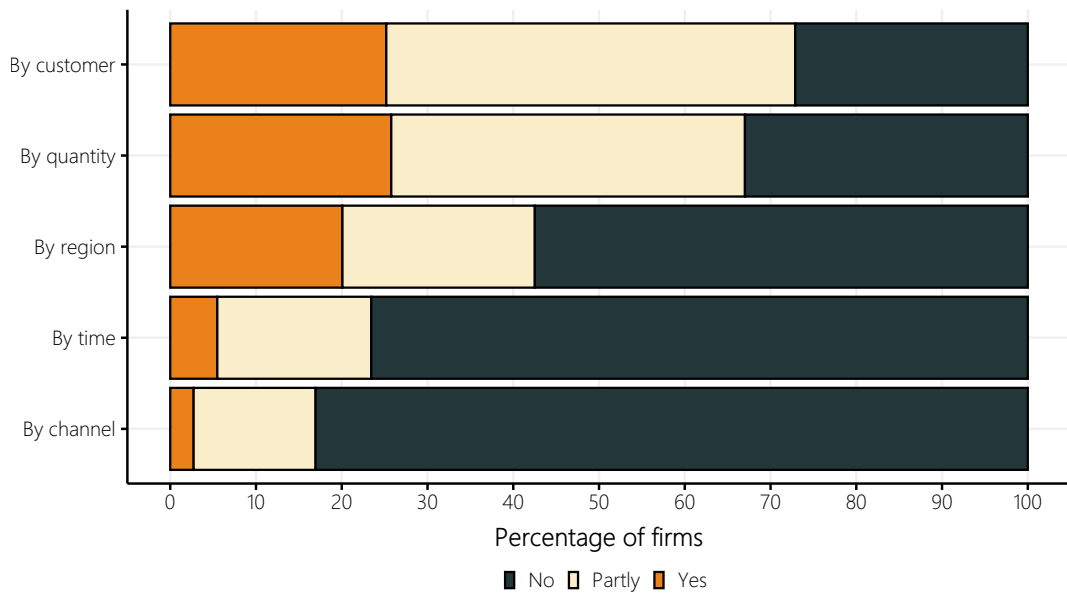
[Figure 2](#) shows that price differentiation is pervasive<sup>8</sup> among Swiss firms: 73% vary prices at least partly across customers, making customer-specific pricing the most common form of discrimination in the sample. Quantity-based discounts are also widespread (67%), while regional price differentiation within Switzerland affects around 43% of firms. Dynamic or time-dependent pricing is less common (23%), and systematic price differences between online and offline channels are reported by only 17%.

Sectoral and client-type differences are substantial ([Table B.1](#) in [Online Appendix B](#)). Manufacturing firms lead in both customer-based (84%) and quantity-based (88%) pricing, consistent with individually negotiated contracts and order-size discounts common in B2B markets. Retailers, by contrast, report almost no customer-level variation (8%) and instead rely more on uniform list prices. Services fall between these extremes: personalized pricing is common (69%) but quantity-based differentiation is less prevalent (46%).

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<sup>8</sup>Only 10% of firms report no price discrimination across any of these dimensions.

Figure 2. Price discrimination across the Swiss economy



*Notes:* This figure shows the percentage of companies for which the price of their main product or service varies fully, partly, or not at all across geographical markets in Switzerland (“by region”), differs across customers (“by customer”), depends on the quantity sold (“by quantity sold”), differs depending on whether the product or service is sold via the Internet (“by channel”), or depends on real-time market dynamics or the time of day (“by time”).

B2B firms are far more likely than B2C firms to differentiate by customer (84% vs. 58%) or quantity (83% vs. 39%), reflecting the contractual flexibility and tailored offerings in business markets. However, B2C firms show relatively higher rates of regional (45%) and time-based (20%) variation, in line with strategies such as seasonal sales and location-specific promotions.

Online-focused firms stand out for their greater use of both channel-based discrimination (39% vs. 10% offline) and time-based pricing (34% vs. 21% offline). This aligns with the technological ease of implementing real-time pricing changes in digital sales environments.

#### 4.4 Which aspects of price setting are automated?

Automation—defined as pricing decisions or processes conducted without human interaction—remains modest but is gaining traction in Swiss firms’ price-setting practices (Table 6). The most common application is in price calculation: 42%

of firms report that calculation is performed at least partly automatically. Automated reviews (23%) and automated competitor price comparisons (18%) are less common, while actual price changes are automated in only 15% of firms, suggesting that most companies retain manual oversight at the point of execution.

Firm size is strongly correlated with automation intensity. Large and medium-sized firms automate more frequently than small firms: for example, automated calculation is used by nearly half of large firms (47%) compared to only 31% of small firms. Sectoral differences are also marked. Retail and manufacturing firms show particularly high adoption of automated calculation (both around 50%), while retail stands out for automated competitor price comparisons (49%) and above-average automated reviews (31%). Manufacturing also shows elevated rates for automated reviews (25%), likely reflecting production-linked pricing adjustments.

The sales channel dimension reveals a distinct split: online-focused firms are much more likely than offline firms to automate reviews (36% vs. 19%) and actual price changes (30% vs. 12%). By contrast, automation of price calculation is prevalent in both channels (about 40–50%). These differences suggest that automation manifests differently across contexts: in retail and manufacturing, it is primarily embedded in back-office systems to calculate prices at scale, while in online businesses, automation more often extends to monitoring competitors and implementing real-time price changes in response to market conditions.

Table 6. Automation in the price-setting process

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Comparison	17.9	11.8	19.5	18.1	12.9	49.4	20.0	16.7	18.6	11.4	35.4
Review	22.9	13.0	26.5	22.8	25.0	31.2	22.8	27.2	17.3	19.3	36.0
Calculation	42.1	30.9	38.0	46.7	52.3	51.4	36.1	54.5	23.2	39.3	50.6
Change	15.2	13.7	15.9	15.0	17.6	10.0	15.2	20.7	8.5	12.0	29.8

*Notes:* This table shows the percentage of companies for which price comparison with their competitors is fully or partly automated (“comparison”), for which the decision to review the price is automated (“review”), for which the price calculation is automated (“calculation”), and for which the decision to change the price is automated (“change”). The options are not mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

The introduction of digital technologies has influenced distinct dimensions of firms’ price-setting practices (Table B.2 in Online Appendix B). First, digital tools

have enhanced the capacity to adjust prices with greater frequency: 23% of respondents report such an improvement, while 77% indicate no change and almost none report a decline. Second, these technologies have strengthened firms' ability to monitor and compare their prices with those of competitors; 18% of respondents note an improvement in this regard. Both effects are markedly more prevalent in specific segments: among retail firms (59% report increased price-changing capacity and 44% report improved competitor-price comparisons) and among online-oriented firms (the corresponding shares are 28% and 32%, respectively).

Indeed, automation is associated with more frequent price reviews and adjustments (Table B.3 in Online Appendix B). Firms that automate any stage of price setting review prices at an implied frequency of 45% to 53% per month, compared with below 40% for non-automated firms. For price changes, the gap is even bigger: 39–44% versus 26–30%. The strongest associations occur for automation of price changes and reviews, followed by competitor comparison and calculation. While these figures represent lower bounds, they indicate that automation reduces frictions and enables firms to update prices more proactively.

## 5 Stage 3: Price Adjustment

This section examines the implementation stage of the price adjustment process, focusing on how frequently Swiss firms change their prices, how adjustments depend on the age of the current price, whether changes are synchronized across the assortment or with competitors, and the main motivations behind price increases and decreases.

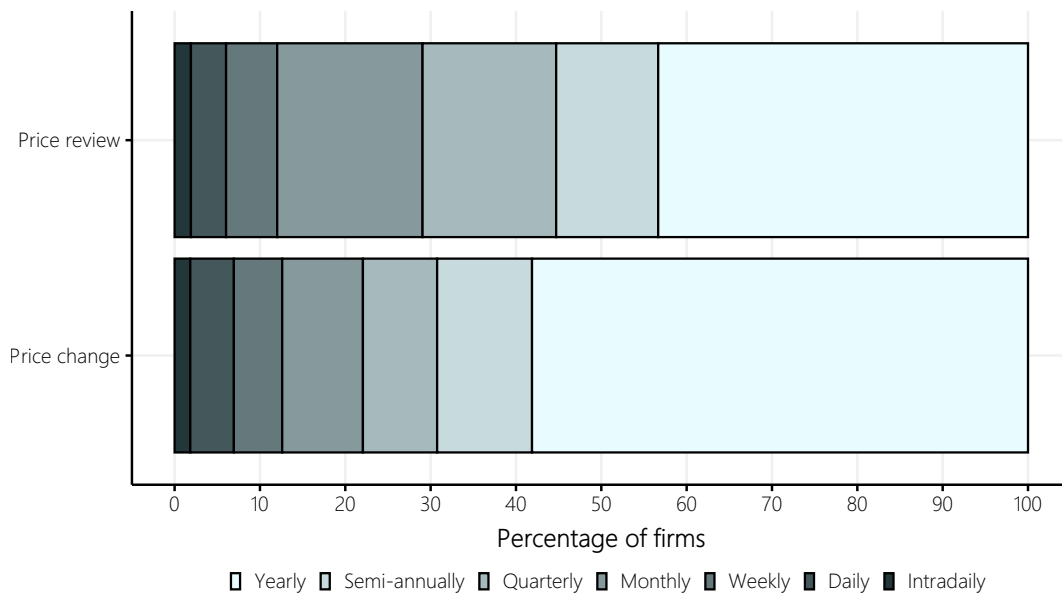
### 5.1 How often do firms change prices?

One measure of price stickiness is the frequency with which firms actually change their prices. To capture the frequency of price adjustments, the survey asked respondents to indicate how often they change the price of their main product or service, choosing from categories such as intradaily, daily, weekly, monthly, quarterly, semi-annually, or yearly. In addition to reporting these categorical shares in Table 7, I calculate an implied monthly frequency of price changes by assigning each category an equivalent monthly rate (e.g., quarterly = 1/3) and taking the weighted average across firms.

Price changes among Swiss firms are generally infrequent. More than half of all firms (58%) adjust the price of their main product or service only once per year, and the median firm reports annual changes. Translating categorical responses into an implied monthly rate yields an average frequency of 31.7% (about one change every three months), while the median firm changes prices only once per year (8.3%).

Figure 3 compares the distribution of firms by the frequency of price changes and price reviews. The distribution for price changes is notably skewed toward lower-frequency categories compared to that of price reviews. This pattern is mirrored in the implied monthly rates: the average frequency of price changes is substantially lower than that of price reviews, at 39.9 percent (see Table 2). The observed gap between the frequencies of price reviews and the frequency of price changes indicates that a substantial share of price reviews do not culminate in actual price adjustments.<sup>9</sup>

Figure 3. Frequency of price reviews and changes



Notes: This figure shows the percentage of companies that review (in the upper bar) and change (in the lower bar) the price of their main product or service at a given frequency (intradaily, daily, weekly, monthly, weekly, monthly, semi-annually, or yearly).

<sup>9</sup>Figure B.1 in Online Appendix B shows that the frequencies of price reviews and changes are strongly correlated: 69% of the joint distribution lies on the diagonal and 82% on the diagonal or adjacent cells. This confirms that firms reviewing more frequently also tend to change prices more frequently, even though many reviews do not lead to adjustments.

The results in [Table 7](#) indicate the presence of strong heterogeneity. Small firms change their prices more frequently than large firms do. Their respective implied monthly frequencies of price changes are 36.7% and 30.9%, respectively. Sectoral differences are also stark. Retail stands out with far more frequent adjustments—the median retailer changes prices quarterly, and its implied monthly change rate (68.3%) is more than double that of manufacturing (30.8%) and services (26.3%). Manufacturing firms typically change prices semi-annually, while service providers change them annually or less.

Differences also emerge by customer base. B2B-oriented firms change prices more frequently (33.7%) than B2C-focused firms (27.2%), in line with more frequent renegotiations in business contracts. Sales channels play a critical role in price dynamics. Almost one-fifth of firms with at least 10% of sales online change prices daily or more often, compared to just 5% of offline-focused firms. The online group also shows slightly higher overall frequency (33.1% vs. 30.2%), but the key difference lies in the upper tail—online sellers are far more likely to engage in very high-frequency adjustments, consistent with the technical ease of repricing in digital environments.

Table 7. Frequency of price changes

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Intradaily	1.8	1.0	2.7	1.5	0.1	1.7	1.3	1.4	0.9	1.3	4.4
Daily	5.1	7.1	5.3	4.6	2.6	4.7	4.2	4.3	6.4	3.7	7.3
Weekly	5.7	7.1	4.6	6.0	4.9	46.9	3.1	5.6	6.2	6.3	3.4
Monthly	9.5	11.4	9.2	9.2	12.2	8.0	7.8	12.3	3.9	9.8	6.9
Quarterly	8.7	12.6	9.2	7.7	11.2	8.2	8.5	10.8	7.7	6.9	14.4
Semi-annually	11.1	10.3	7.8	13.2	18.9	20.9	9.9	13.0	12.5	10.1	11.6
Yearly	58.1	50.5	61.2	57.8	50.1	9.6	65.3	52.6	62.4	61.9	51.9
Frequency (mean)	31.7	36.7	31.3	30.9	30.8	68.3	26.3	33.7	27.2	30.2	33.1
Frequency (median)	8.3	16.7	8.3	16.7	16.7	33.3	8.3	8.3	16.7	8.3	16.7

*Notes:* This table shows the percentage of companies that change the price of their main product or service several times a day (“intradaily”), “daily,” “weekly,” “monthly,” “quarterly,” “semi-annually,” or “yearly.” The bottom row shows the implied monthly frequency of price changes. The options are mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

Earlier Swiss evidence provides useful benchmarks for interpreting these results. For manufacturing firms, [Lein \(2010\)](#) reports a quarterly frequency of price changes of 31 percent based on KOF survey data (1984–2007), which closely matches our manufacturing estimate of 30.8 percent. [Kaufmann and Renkin \(2019\)](#) report a

quarterly frequency of 24 percent for producer prices based on Swiss PPI microdata for 2012–2014, providing another benchmark for wholesale and intermediate goods pricing. Using Swiss CPI microdata, [Kaufmann \(2009\)](#) finds an average quarterly frequency of 23.4 percent (median 13.8 percent) for consumer prices between 2000 and 2005, while [Schnell \(2015\)](#) documents much lower rates—around 9 percent quarterly—for selected service categories such as hairdressers and cinemas. More recent evidence by [Rudolf and Seiler \(2022\)](#) suggests a frequency of 26.2 percent for consumer prices over 2008–2022, which is strikingly close to our B2C estimate of 27.2 percent.

These comparisons suggest that our qualitative survey-based results are broadly consistent with prior evidence. Price stickiness remains a central feature of Swiss firm behavior, but the degree of flexibility varies sharply across sectors, customer types, and channels. Retail and online-oriented firms form a high-frequency cluster, while services, manufacturing, and offline B2C sellers remain firmly in the low-frequency domain.

Further evidence from the PSS suggests a gradual trend from and toward greater price flexibility. Around 32% of firms report an increase in their frequency of price changes over the past decade, and 37% expect this trend to continue over the next three years ([Table B.4 in Online Appendix B](#)). At the same time, barely any firm expects to change prices less frequently. This expected increase is driven primarily by manufacturing and retail firms, and businesses with significant online sales.

## **5.2 How does the probability of price adjustment depend on the age of the price spell?**

The survey also explored whether the likelihood of a price change depends on how long the current price has been in place. In the literature, this relationship is captured by the duration hazard function, which measures the probability of a price adjustment as a function of the age of the price spell. Respondents were asked whether the probability of a price change is higher shortly after a previous change (decreasing hazard), higher when the price has remained unchanged for a long time (increasing hazard), or unrelated to the time since the last change (constant hazard).

Swiss firms most often report that the likelihood of a price change is unrelated to how long the current price has been in place: 70% of respondents describe their hazard function as flat ([Table 8](#)). About a quarter (24.8%) indicate an increasing

Table 8. Duration hazard function of price adjustments

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Increasing hazard	24.8	23.1	27.9	23.3	28.9	9.2	26.3	27.7	26.3	27.3	18.9
Constant hazard	69.6	67.6	66.9	71.5	66.4	82.6	67.5	67.8	65.3	68.7	67.9
Decreasing hazard	5.6	9.3	5.2	5.2	4.8	8.2	6.2	4.5	8.3	4.1	13.1

*Notes:* This table shows the percentage of companies for which the probability of changing the price of their product or service is higher if the price has not been changed for a long time than if the price has been changed recently (“increasing hazard”), for which the probability of changing the price is higher if the price has been changed recently than if the price has not been changed for a long time (“decreasing hazard”), and for which the probability of changing the price is independent of the time of previous price changes (“constant hazard”). The options are mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

hazard, consistent with prices becoming more likely to change the longer they have been in place, while only 5.6% report a decreasing hazard, where adjustments are more likely soon after a change. On average, this suggests a slightly upward-sloping hazard function.

Sectoral differences are pronounced. Manufacturing firms are the most likely to report an increasing hazard (29%), followed by services (26%) and retail (9%). By contrast, a decreasing hazard is more often reported in retail (8%) than in manufacturing (5%). Sales channels reveal even sharper differences. Online firms are less likely to have an increasing hazard (18.9%) than offline firms (27.3%) and are more likely to report a decreasing hazard (13.1% vs. 4.1%). Channel differences are also notable: only 19% of online firms describe their hazard as increasing, compared to 27% of offline firms, and nearly 70% of online firms report a constant hazard. customer base and firm size plays a smaller role in explaining differences in hazard functions.

Overall, these results contrast with much of the early empirical literature that found downward-sloping hazards (Nakamura and Steinsson, 2008; Klenow and Malin, 2010; Álvarez et al., 2021), but align with more recent microdata studies that control for cross-sectional heterogeneity (Álvarez et al., 2005) and find upward-sloping patterns (Fougère et al., 2007; Kaufmann, 2010; Karadi et al., 2023). The prevalence of upward-sloping hazards is consistent with state-dependent pricing models, in which the probability of adjustment rises as the posted price drifts further from the optimal level over time.

### 5.3 Are price changes synchronized within or across firms?

Beyond frequency, the timing of price adjustments provides further insight into pricing behavior. The survey asked whether firms typically change prices for other products in their assortment at the same time as for their main product (synchronization within firms), and whether they tend to adjust prices in response to competitors changing theirs (synchronization across firms).

Table 9. Synchronization of price changes

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Within firms	30.0	29.8	34.7	27.2	48.5	9.0	24.3	40.6	21.4	29.9	34.7
Across firms	25.5	22.5	25.7	26.0	21.7	48.2	26.4	21.5	33.6	25.3	26.1

*Notes:* This table shows the percentage of companies which change the prices of all or most other products or services at the same time they change the price of one product or service (“within firms”) as well as the percentage of companies which always or usually change the price of their main product or service at the same time when their competitors change the price of their product or service (“across firms”). The options are not mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

Firms are more likely to synchronize price changes within their own assortment (30%) than with competitors (26%), consistent with earlier evidence for Switzerland (Rudolf and Seiler, 2022) and other countries (Bhattarai and Schoenle, 2014; Nilsen et al., 2021; Dedola et al., 2021) based on microdata underlying consumer and producer prices.

Sectoral differences are pronounced. Manufacturing stands out with almost half of firms (49%) reporting internal synchronization, likely reflecting coordinated list-price updates or cost-driven repricing across product lines. Retail shows the opposite pattern: only 9% synchronize internally, but almost half (48%) adjust prices in step with competitors, in line with a more competitive and transparent pricing environment. Smaller firms are somewhat more likely than large firms to synchronize internally (35% vs. 27%), possibly because narrower assortments make coordination easier, while competitor synchronization is similar across size classes. B2B firms report much higher internal synchronization than B2C firms (41% vs. 21%), whereas B2C firms synchronize more often with competitors (34% vs. 22%), reflecting the stronger role of competitive pressures in consumer markets. Online and offline firms display similar patterns, with only a slight tendency for online firms to coordinate internally more frequently.

## 5.4 What factors drive price increases and decreases?

Understanding the factors that motivate price changes—and the extent to which changes in these factors (such as higher wages or lower input costs) are passed through to prices—is essential for interpreting inflation dynamics. The survey asked firms to assess the importance of various cost and market-related factors for their pricing decisions. Respondents rated each factor on a scale from 4 (“very important”) to 1 (“totally unimportant”), separately for price increases and price decreases. The factors included labor costs, financing costs, raw material costs, energy and fuel costs, exchange rates, suppliers’ prices, productivity, demand conditions, competitors’ prices, product improvements, and the intention to gain market share. The results, presented in [Table 10](#) and [Table 11](#), report the weighted average scores for each factor.

Table 10. Importance of factors to motivate price increases

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Labor costs (+)	3.1	3.2	3.2	3.0	2.9	2.3	3.1	3.1	3.1	3.3	2.6
Financing costs (+)	2.2	2.1	2.2	2.2	1.9	1.8	2.2	2.1	2.2	2.1	2.2
Cost of raw materials (+)	2.9	2.8	2.8	3.0	3.7	3.6	2.5	3.1	2.6	2.9	2.6
Energy and fuel costs (+)	2.6	2.5	2.6	2.6	3.1	2.8	2.4	2.8	2.4	2.6	2.5
Exchange rate (+)	2.1	2.1	2.2	2.1	2.8	2.8	2.0	2.4	1.9	2.1	2.4
Suppliers’ prices (+)	3.0	3.1	3.0	3.0	3.6	3.7	2.8	3.2	2.8	3.1	2.8
Productivity (–)	2.3	2.2	2.4	2.3	2.2	1.9	2.3	2.3	2.0	2.3	2.1
Demand (+)	2.2	2.5	2.4	2.1	2.3	1.9	2.2	2.4	1.9	2.2	2.4
Demand (–)	2.2	2.3	2.3	2.1	2.3	1.9	2.2	2.3	2.0	2.2	2.1
Competitors’ prices (+)	2.2	2.1	2.1	2.2	2.1	2.7	2.2	2.2	2.0	2.1	2.4
Product improvement	2.4	2.4	2.4	2.4	2.6	2.8	2.3	2.5	2.3	2.3	2.6
Intention to gain market shares	2.0	2.2	2.0	2.0	2.3	2.3	2.0	2.1	1.9	2.0	2.1

*Notes:* This table shows the importance of each of the listed factors in motivating companies to increase the price of their main product or service. Numbers are weighted average scores across answer choices, ranging from 1 (“totally unimportant”) over 2 (“of minor importance”) and 3 (“moderately important”) to 4 (“very important”). The signs after the factors indicate the direction of change of each factor. The options are not mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

For price increases ([Table 10](#)), labor costs, suppliers’ prices, and raw material costs emerge as the three most important drivers, each with an average score close to 3.0. Labor costs are especially important for service providers (3.1), while in manufacturing the cost of raw materials dominates (3.7), and in retail it is suppliers’ prices (3.7). Energy and fuel costs also play a non-negligible role in manufacturing (3.1), but are less important in services. Demand-related factors generally rank lower, with average scores around 2.2, indicating that firms tend

Table 11. Importance of factors to motivate price decreases

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Labor costs (–)	2.3	2.3	2.3	2.4	2.3	2.2	2.3	2.3	2.2	2.3	2.2
Financing costs (–)	1.9	2.0	1.8	1.9	1.8	2.0	1.9	1.8	2.0	1.9	2.0
Cost of raw materials (–)	2.7	2.6	2.7	2.8	3.2	2.9	2.1	2.8	2.4	2.7	2.4
Energy and fuel costs (–)	2.4	2.3	2.4	2.6	2.7	2.5	2.0	2.5	2.2	2.4	2.2
Exchange rate (–)	2.2	2.2	2.2	2.3	2.5	2.5	1.9	2.4	2.1	2.2	2.3
Suppliers’ prices (–)	2.8	2.8	2.9	2.8	3.2	3.3	2.3	2.9	2.8	2.9	2.7
Productivity (+)	2.2	2.2	2.3	2.2	2.4	2.1	2.1	2.3	2.1	2.3	2.1
Demand (+)	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1
Demand (–)	2.3	2.2	2.3	2.4	2.3	2.2	2.3	2.3	2.2	2.3	2.3
Competitors’ prices (–)	2.2	2.2	2.2	2.4	2.2	2.4	2.2	2.3	2.2	2.2	2.3
Product improvement	2.1	2.1	2.0	2.2	2.2	2.2	1.9	2.1	2.0	2.1	2.1
Intention to gain market shares	2.2	2.2	2.2	2.5	2.4	2.2	2.2	2.3	2.1	2.2	2.3

*Notes:* This table shows the importance of each of the listed factors in motivating companies to decrease the price of their main product or service. Numbers are weighted average scores across answer choices, ranging from 1 (“totally unimportant”) over 2 (“of minor importance”) and 3 (“moderately important”) to 4 (“very important”). The signs after the factors indicate the direction of change of each factor. The options are not mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

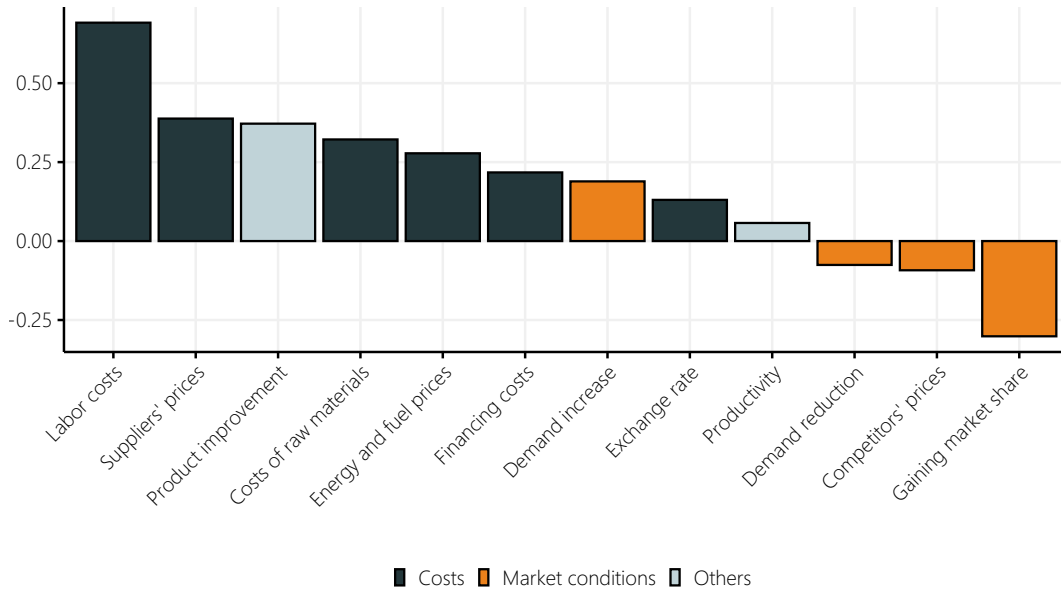
to view cost-side pressures as more relevant for raising prices than changes in demand.

For price decreases (Table 11), suppliers’ prices again top the list, followed closely by raw material costs and, to a lesser extent, labor costs. In manufacturing, reductions in suppliers’ prices (3.2) and raw material costs (3.2) are the strongest motivations for lowering prices, while in services, decreases in labor costs are nearly as important as decreases in suppliers’ prices. In retail, declines in the exchange rate (2.5) and in energy and fuel costs (2.5) also feature prominently alongside supplier and raw material costs.

Taken together, the evidence indicates that changes in factors that directly affect marginal costs—particularly input costs from suppliers, raw materials, and labor—are the primary determinants of both upward and downward price adjustments. By contrast, demand-side changes, competitive pressures, and strategic considerations such as gaining market share are rated as considerably less important in firms’ pricing decisions. These patterns likely reflect underlying cost structures and the nature of shocks: firms with higher labor shares naturally view labor costs as more influential, while manufacturing firms emphasize raw material costs. Moreover, some shocks are asymmetric—wages and certain input prices tend to rise more often than they fall—which helps explain why labor costs

feature prominently for price increases but less so for decreases. Part of this asymmetry may also stem from the macroeconomic context: the PSS was conducted during a period of renewed inflationary pressure (see [Section 2.3](#)), when nominal cost increases occurred more frequently than decreases, so firms may simply pass aggregate inflation through to their customers—a mechanism documented by [Honoré et al. \(2012\)](#) for Swiss CPI microdata.

Figure 4. Asymmetries in factors motivating price changes



*Notes:* This figure plots, for each factor, the difference between its importance score when motivating a price increase and its score when motivating a price decrease, aggregated across firms. Positive values indicate that the factor is more important for price increases than for price decreases; negative values indicate the reverse. Scores range from 1 (“totally unimportant”) to 4 (“very important”).

To further investigate asymmetries in the factors motivating price increases and decreases, I compute, for each firm and each factor, the difference between its reported importance score for price increases and the corresponding score for price decreases. Positive values indicate that the factor is, on average, more relevant for increasing prices than for reducing them, while negative values indicate the opposite. I then aggregate these differences across firms to obtain an overall measure of asymmetry per factor. The results, shown in [Figure 4](#), reveal that cost-related factors generally display positive asymmetries, implying that increases in costs are more likely to prompt price increases than equivalent cost decreases are to

lead to price reductions. This pattern is particularly pronounced for labor costs (0.69), but also sizable for suppliers' prices (0.388), and the costs of raw materials (0.32). In contrast, factors related to market conditions exhibit the reversed pattern: the intention to gain market share ( $-0.30$ ), changes in competitors' prices ( $-0.09$ ) and a decline in demand ( $-0.08$ ) are negative, implying they are more important for price decreases than for price increases. Overall, these findings suggest that firms respond more strongly to upward than to downward shocks in most cost components (by increasing their prices), whereas firms respond more strongly to downward than to upward shocks in most market-condition factors (by decreasing their prices). This pattern is consistent with theoretical predictions in [Kohler et al. \(2025\)](#), who show that information frictions can lead to exactly such asymmetries.

## 6 Stage 4: Price Rigidity

This final section examines the relative importance of different theories of price stickiness in Swiss firms. While many companies regularly review prices, they often decide not to adjust them (see [Figure 3](#)). The literature offers multiple explanations for this reluctance, ranging from contractual constraints to strategic considerations and behavioral factors. The survey asked respondents to rate the importance of various potential reasons for keeping prices unchanged, each corresponding to a specific theory of sticky prices (see [Table 12](#) for the exact survey statements). Most of these follow the frameworks of [Fabiani et al. \(2005\)](#) and [Apel et al. \(2005\)](#), but the questionnaire also included additional explanations—such as uncertainty—as potential sources of rigidity, making it the first time these channels are tested in a comparable survey framework.

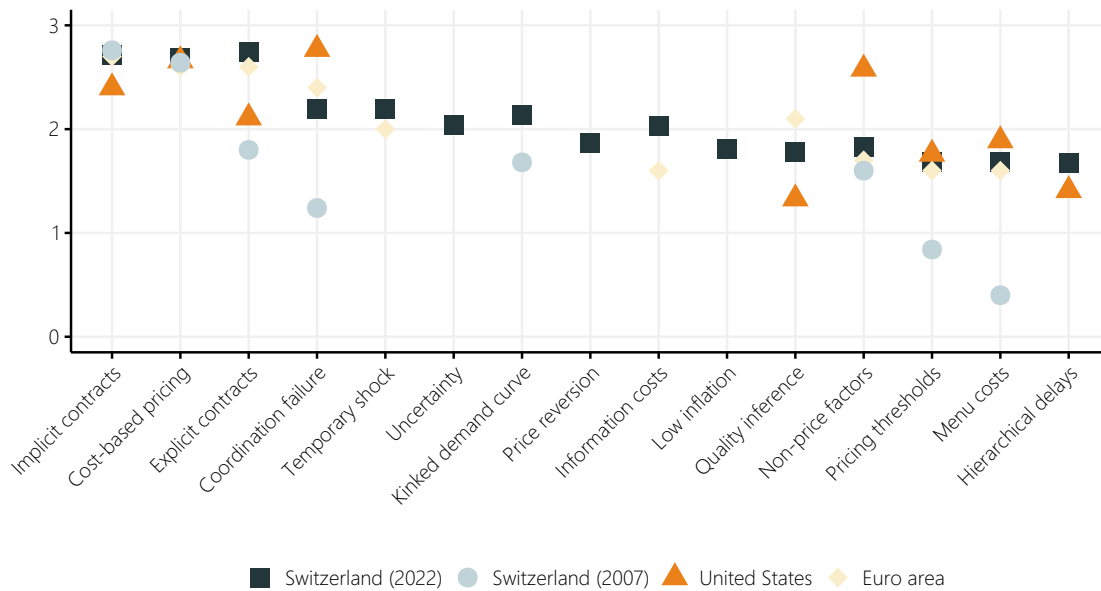
Table 12. Theories that explain price stickiness

Theory	Survey statement
Coordination failure	We are hesitant to change prices for fear that our competitors will not follow suit.
Temporary shock	We do not change the price because the next price adjustment can be made only after a certain period of time.
Price reversion	We fear that we need to revise the price in opposite direction soon after adjusting prices.
Explicit contracts	We have fixed contracts that limit our ability to change prices.
Implicit contracts	Our customers expect a stable price, and more frequent changes could damage customer relationships.
Pricing thresholds	We set prices at commercially attractive price points (e.g. CHF 9.90 instead of CHF 10.10) and only change them when it is convenient to move to a new attractive threshold.
Information costs	It is costly in terms of time or money to gather all relevant information for pricing decisions.
Menu costs	It is costly for us to change prices (e.g., new catalogs, changing price tags).
Cost-based pricing	We change prices when we realize that costs changed.
Non-price factors	We prefer to vary other elements of our products or services (e.g., warranty, delivery lag, customer services) rather than change prices.
Quality inference	We don't reduce prices because our customers may take this as a reduction in the quality of our product or service.
Hierarchical delays	Delays within our organization slow down pricing decisions.
Low inflation	Low inflation makes large price changes more noticeable.
Uncertainty	We are reluctant to change the price if we are uncertain about the future development of our business situation.
Kinked demand curve	We loose many customers when raising the price but gain only a few new customers when cutting it.

*Notes:* This table maps the statements presented to the firms in the survey ("survey statement") to the respective theories explaining price stickiness ("theory").

Figure 5 shows the weighted average importance scores with comparable results for the euro area (Fabiani et al., 2005) and the United States (Blinder et al., 1998), and with earlier results for Switzerland (Zurlinden, 2007). The Swiss data reveal three dominant explanations: implicit contracts, cost-based pricing, and explicit contracts.

Figure 5. Factors that delay price changes



Notes: This figure shows the importance of each of the theories tested (see Table 12 for the exact survey statements) as a reason for Swiss companies not to change the price of their main product or service. Numbers are weighted average scores across answer choices, ranging from 1 (“totally unimportant”) over 2 (“of minor importance”) and 3 (“moderately important”) to 4 (“very important”). The earlier results for Switzerland are taken from Zurlinden (2007). The results for the United States are taken from Blinder et al. (1998). The results for the euro area are taken from Fabiani et al. (2005).

Table 13 shows the percentage of firms that consider each theory of price stickiness (Table 12) to be either “very important” or “moderately important.”<sup>10</sup> Swiss firms cite relational and contractual considerations as the dominant reasons for keeping prices unchanged. Implicit contracts, reflecting the desire to maintain stable prices to protect customer relationships, are most frequently rated as important (65%), especially in manufacturing (74%) and among B2B firms (71%), where long-term relationships are crucial. The large role of implicit contracts is supported by evidence from the background data of the survey: the vast majority of firms deal with repeat customers, while fewer than 10% mainly serve one-off buyers (Table A.4). It is therefore unsurprising that the fear of damaging customer relationships is a central factor in price-setting decisions.

Cost-based pricing (64%) ranks almost equally high, with its importance particu-

<sup>10</sup>Table B.5 in Online Appendix B shows the importance of each theories as weighted average scores across answer choices, ranging from 1 (“totally unimportant”) to 4 (“very important”).

Table 13. Importance of theories that explain price stickiness

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Explicit contracts	63.2	42.9	60.5	68.6	59.9	12.6	64.6	65.7	59.7	62.8	66.8
Implicit contracts	64.9	69.9	70.9	60.6	73.6	58.4	62.4	70.8	57.4	64.8	59.9
Coordination failure	34.4	35.9	34.3	34.2	44.8	68.0	29.5	39.0	28.7	35.7	20.5
Cost-based pricing	64.3	63.9	67.4	62.7	80.5	47.3	57.3	77.7	45.7	64.4	58.7
Kinked demand curve	37.3	45.7	36.0	36.4	32.0	42.5	39.7	42.5	31.8	34.3	45.3
Hierarchical delays	11.6	14.4	9.4	12.4	19.4	5.7	9.8	14.9	8.0	12.7	3.4
Low inflation	14.6	20.7	16.7	12.3	17.2	20.8	12.3	17.8	9.3	14.9	10.8
Menu costs	15.3	13.5	10.3	18.4	19.1	25.0	15.8	19.1	15.8	11.4	26.8
Information costs	31.4	31.5	27.0	33.9	36.9	38.5	28.2	41.0	23.5	30.2	38.4
Non-price factors	22.2	29.0	20.0	22.2	12.8	6.7	20.4	26.0	16.0	20.6	28.6
Quality inference	14.9	29.6	22.3	7.9	16.8	10.4	15.8	16.3	12.5	15.0	13.6
Price reversion	17.6	17.7	16.3	18.4	15.8	30.9	14.9	22.8	10.6	15.9	23.0
Temporary shock	35.4	35.7	40.3	32.5	44.5	40.5	36.2	38.1	34.5	32.6	42.9
Pricing thresholds	15.8	23.8	13.0	15.9	7.8	78.0	16.6	13.2	23.3	16.2	13.0
Uncertainty	29.3	33.6	35.2	25.2	32.9	25.7	29.0	33.2	23.3	27.1	36.3

*Notes:* This table shows the importance of each of the theories tested (Table 12) as a reason for Swiss companies not to change the price of their main product or service. Numbers are weighted average scores across answer choices, ranging from 1 (“totally unimportant”) over 2 (“of minor importance”) and 3 (“moderately important”) to 4 (“very important”). The options are not mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

larly pronounced in manufacturing (81%), where price adjustments closely track changes in input costs. This is consistent with earlier findings in Table 10 and Table 11, where input cost shocks—especially for labor, raw materials, and suppliers’ prices—were the dominant triggers for both increases and decreases. This pattern supports the view that cost pass-through, rather than demand fluctuations, anchors many firms’ pricing policies.

Explicit contracts (63%) play another central role, especially outside of retail. Here, contractual agreements—often with customers or suppliers—limit the frequency of price changes.

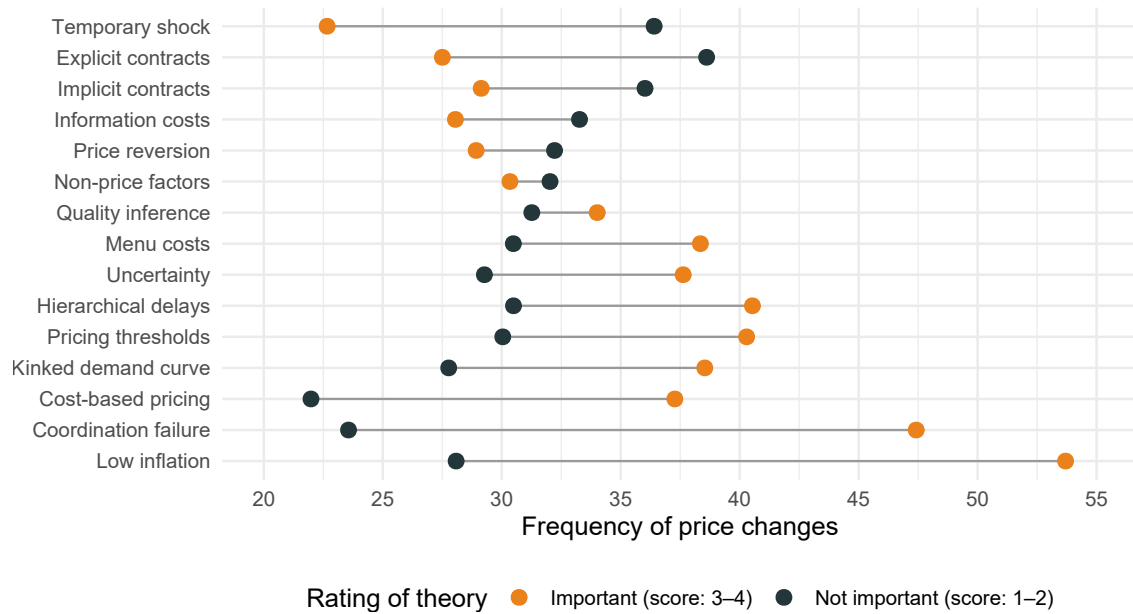
Sector-specific patterns stand out. In retail, psychological pricing thresholds dominate (78%), dwarfing their relevance in other sectors, and indicating that many retailers delay adjustments until they can move to the next “attractive” price point. Retailers also report the highest incidence of coordination failure (68%), suggesting strong strategic interdependence in competitive consumer markets. By contrast, manufacturing and services place more weight on implicit and explicit contracts and on cost-based pricing.

Other explanations rank lower overall. The kinked demand curve (37%) is mod-

erately important across sectors, hinting at asymmetric customer reactions (firms fear losing many customers when raising prices but gaining only a few when lowering them) and fairness concerns (Okun, 1981; Rotemberg, 2005). Temporary shocks (35%) and coordination failure (34%) matter for a significant minority of firms, with the latter more relevant in manufacturing and retail than in services. Information costs (31%) are of secondary importance, and uncertainty (29%) is surprisingly modest given its prominence in theoretical discussions. Menu costs (15%) and hierarchical delays (12%) are among the least cited obstacles, suggesting that operational frictions in changing prices are less important than relational or strategic considerations. The relatively low importance of menu costs is particularly notable given their popularity in theoretical modeling of nominal rigidities. Overall, the Swiss evidence mirrors findings from the euro area and U.S. (Fabi-ani et al., 2005; Blinder et al., 1998), with implicit contracts and cost-based pricing emerging as the primary sources of nominal rigidity, while sector-specific mechanisms—pricing thresholds in retail, coordination failure in competitive industries—add nuance to the aggregate picture.

Specifically, I compare the implied monthly frequency of price changes—derived from the survey question on adjustment intervals—between firms that rate a theory as important (scores 3, “moderately important,” or 4, “very important”) and those that do not (scores 1, “totally unimportant,” or 2, “of minor importance”). This approach connects stated reasons for rigidity to actual adjustment behavior. Figure 6 visualizes these differences using a dumbbell chart. For each theory, the chart shows the mean frequency of price changes for endorsing firms (in orange) and non-endorsing firms (in blue). The interpretation focuses on which side of the bar each group occupies: when the orange point lies to the right, endorsing firms change prices more frequently; when it lies to the left, they change prices less frequently.

Figure 6. Implied monthly frequency of price changes by importance of theories for price rigidity



*Notes:* The figure compares the implied monthly frequency of price changes between firms that rate a theory as important (scores 3, “moderately important,” or 4, “very important”) and those that do not (scores 1, “totally unimportant,” or 2, “of minor importance”).

Several patterns stand out. For example, firms citing temporary shocks as important adjust prices at an implied frequency of 23% per month, compared to 36% for non-endorsers. Similarly, endorsers of explicit contracts average 28% versus 39%, and those citing implicit contracts average 29% versus 36%. Endorsement of information costs also correlates with slower adjustments (28% vs. 33%). These gaps indicate that firms invoking contractual or relational constraints adjust prices far less often, consistent with time-dependent behavior and the importance of long-term agreements or customer relationships.

By contrast, at the bottom of the chart, theories such as low inflation, coordination failure, and cost-based pricing are linked to the highest price-change frequencies among endorsing firms. Firms rating low inflation as important change prices at 54% per month, compared to 28% for non-endorsers—a striking difference. Similarly, endorsers of coordination failure average 47% versus 24%, and those citing cost-based pricing average 37% versus 22%. These patterns suggest that these theories are invoked in environments where price monitoring is intense

and competitive pressures are high, aligning with state-dependent behavior and strategic interaction models.

Overall, the results reveal a clear link between the importance of different reasons for price rigidity and actual price-adjustment behavior. Strategic and environment-related explanations (e.g., coordination failure, low inflation) correspond to more frequent adjustments, while contractual and relational theories correspond to less frequent changes. This reinforces the distinction between state-dependent and time-dependent adjustment regimes<sup>11</sup> and provides empirical support for theoretical classifications in the literature.

## 7 Conclusion

This paper has introduced the Price-Setting Survey (PSS) and presented new evidence on the price-setting behavior of firms across the Swiss private economy, covering all stages of price setting: review, formation, adjustment, and rigidity. By directly eliciting firms' reasoning, strategies, and constraints, the survey goes beyond what can be inferred from micro-price data, offering a richer picture of how prices are set in practice.

The results point to a hybrid structure in the timing of price reviews, combining both time- and state-dependent elements. In setting prices, firms focus on current economic conditions, give strong weight to competitor prices over purely cost-plus rules, and make frequent use of price discrimination. Price changes occur less often than reviews, tend to be synchronized within rather than across firms, and show a flat but slightly upward-sloping hazard of adjustment. Cost pass-through is driven mainly by labor, supplier, and raw material costs, with asymmetric responses to cost versus demand shocks. Price rigidity stems primarily from implicit and explicit contracts and cost-based pricing, while menu costs play only a limited role.

The evidence supports several key assumptions of macroeconomic theory but also reveals substantial cross-sectional heterogeneity in price-setting behavior across

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<sup>11</sup>Figure B.2 in Online Appendix B confirms these patterns using firms' stated review rules. Reasons associated with low price-change frequency (e.g., contracts, temporary shocks) are less strongly linked to state-dependent review rules, while reasons associated with high frequency (e.g., coordination failure, low inflation) correspond to higher state-dependent shares. This reinforces the conceptual mapping between rigidity mechanisms and adjustment regimes, while revealing that some contractual constraints coexist with event-driven monitoring, suggesting mixed regimes in practice.

sectors, firm sizes, customer types, and sales channels. These differences matter for understanding inflation dynamics and the transmission of shocks in Switzerland. By complementing micro-price data with qualitative insights, this study provides both a benchmark for future surveys and an empirical foundation for refining models of nominal rigidity.

## 8 List of Abbreviations

CHF	Swiss Franc
COVID-19	Coronavirus Disease 2019
CPI	Consumer Price Index
ETH	Eidgenössische Technische Hochschule
FTE	Full-time equivalent
GDP	Gross Domestic Product
IPN	Inflation Persistence Network
KOF	Konjunkturforschungsstelle
NACE	Nomenclature statistique des activités économiques dans la Communauté européenne
PPI	Producer Price Index
PSS	Price-Setting Survey
SNB	Swiss National Bank

## 9 Declarations

### 9.1 Availability of data and materials

The data that support the findings of this study are available from the KOF Swiss Economic Institute at ETH Zurich but restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available. Data are however available from the authors upon reasonable request and with permission of the KOF.

### 9.2 Competing interests

The author declares that he has no competing interests.

### 9.3 Funding

Not applicable.

### 9.4 Authors' contributions

The author confirms the sole responsibility for the conception of the study, presented results and manuscript preparation.

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## Online Appendix

# How Firms Set Their Prices: Survey Evidence Along the Stages of Price Setting

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### Abstract

This paper presents novel survey evidence on how firms set prices across the private-sector Swiss economy. The survey covers all stages of the price-setting process and reveals substantial heterogeneity by sector, firm size, customer type, and sales channel. Firms combine time- and state-dependent elements when reviewing prices. Competitor-based pricing dominates over markup rules, and price discrimination is multidimensional and widespread. Price changes occur far less frequently than reviews, are typically synchronized within firms, and exhibit a slightly upward-sloping hazard of adjustment. Cost pass-through is driven mainly by labor, supplier, and raw material costs, with asymmetric responses to cost versus demand shocks. Price rigidity arises primarily from implicit and explicit contracts and cost-based pricing, while operational frictions such as menu costs play only a minor role.

JEL classification: E30, D22, D40, L11, C83

Keywords: Price Setting, Price Adjustment, Price Rigidity, Inflation, Survey Evidence

## A. The Price-Setting Survey: Capturing Firm Behavior along the Stages of Price Setting

### A.1 Sample design

Table A.1. Respondents' roles and divisions within their firm

	Share of firms (%)
Owner/CEO/board director/authorized officer	70.0
Department head	16.7
Team manager	4.7
Specialist	8.6
Management	57.3
Finances/controlling/accounting	35.8
Sales	3.6
Marketing/communication	0.5
Human resources	0.7
Executive department/administration	2.1

*Notes:* This table shows the percentage of respondents across roles (in the upper panel) and divisions (in the lower panel) within their firm.

Table A.2. Sectoral and size distribution of firms

	Share of firms in panel (%)	Share of firms in economy (%)
<i>Sector group</i>		
Manufacturing	29.4	9.4
Construction	5.3	11.0
Retail Trade	25.4	20.3
Financial and Insurance Activities	0.8	1.9
Other Service Activities	36.2	56.1
Other	2.8	0.7
<i>Size class</i>		
S	59.3	94.9
M	28.4	4.5
L	12.3	0.6

*Notes:* This table shows the sectoral and size distribution of the 1,715 firms participating in the survey experiment. Sector group “other service activities” includes all services excluding retail trade and financial and insurance activities. Sector group “other” includes agriculture, forestry, fishing, mining, electricity, gas, water supply, waste, public administration, education, activities of households as employers, activities of membership organizations, activities of extraterritorial organizations. Size classes differentiate between large (employing more than 250 employees, “L”), medium-sized (employing more than 50 employees but less than or equal to 250 employees, “M”), and small firms (employing fewer than 50 employees but more than 1 employee, “S”).

Table A.3. Comparison of non-respondents and respondents across firm characteristics

	Full sample			KOF survey participants		
	Non-Respondents	Respondents	Propensity (logit)	Non-Respondents	Respondents	Propensity (logit)
<i>Size</i>						
S	0.721	0.588	Ref. Cat.	0.562	0.549	Ref. Cat.
M	0.199	0.281	1.169** (0.078)	0.304	0.305	0.988 (0.086)
L	0.080	0.131	1.465*** (0.107)	0.135	0.146	1.214* (0.113)
<i>Sector</i>						
Manufacturing	0.167	0.302	Ref. Cat.	0.342	0.371	Ref. Cat.
Retail	0.541	0.236	0.250*** (0.255)	0.064	0.060	0.781 (0.289)
Services	0.292	0.462	0.882 (0.209)	0.594	0.569	0.844 (0.209)
<i>Sector (NACE sections)</i>						
C	0.157	0.278	Ref. Cat.	0.304	0.335	Ref. Cat.
G	0.546	0.276	1.038 (0.238)	0.124	0.125	1.117 (0.238)
H	0.023	0.045	1.223 (0.252)	0.045	0.055	1.281 (0.252)
I	0.017	0.020	0.774 (0.289)	0.033	0.025	0.807 (0.288)
J	0.016	0.029	1.140 (0.274)	0.031	0.035	1.163 (0.274)
K	0.029	0.052	1.144 (0.247)	0.056	0.063	1.197 (0.247)
L	0.008	0.008	0.595 (0.379)	0.016	0.010	0.596 (0.379)
M	0.038	0.068	1.228 (0.234)	0.071	0.085	1.341 (0.234)
N	0.017	0.022	0.842 (0.282)	0.034	0.026	0.850 (0.283)
P	0.010	0.013	0.813 (0.328)	0.020	0.016	0.864 (0.329)
Q	0.043	0.057	0.803 (0.237)	0.083	0.069	0.848 (0.237)
R	0.021	0.027	0.935 (0.271)	0.040	0.032	0.915 (0.271)
<i>Region</i>						
Lake Geneva	0.165	0.137	Ref. Cat.	0.142	0.128	Ref. Cat.
Mittelland	0.206	0.201	0.955 (0.154)	0.211	0.203	0.920 (0.184)
Northwestern	0.118	0.121	0.960 (0.197)	0.134	0.122	0.848 (0.232)
Zurich	0.176	0.187	1.046 (0.189)	0.175	0.181	0.937 (0.224)
Eastern	0.157	0.165	0.990 (0.192)	0.166	0.175	0.987 (0.227)
Central	0.117	0.119	1.054 (0.197)	0.109	0.126	1.145 (0.234)
Ticino	0.059	0.070	1.392 (0.595)	0.062	0.066	1.283 (0.685)
<i>Language</i>						
D	0.712	0.732	Ref. Cat.	0.728	0.748	Ref. Cat.
F	0.226	0.194	0.956 (0.154)	0.205	0.182	0.870 (0.181)
I	0.062	0.074	0.824 (0.556)	0.067	0.069	0.703 (0.637)

Notes: This table compares the distribution of respondents and non-respondents (as shares of the respective samples) across key firm characteristics (size class, sector classifications, region, and language region) for (i) the full survey sample and (ii) the sample restricted to firms that participated in previous KOF business tendency surveys. Logit-based response propensities (odds ratios from logistic regressions) are used to assess the extent to which non-response is systematically related to firm characteristics. NOGA sections with fewer than 10 participants are omitted from logistic models. Standard errors are in parentheses; \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels.

Table A.4 provides a comprehensive profile of the firms participating in the Price-Setting Survey. I first summarize the distribution of respondents across the main dimensions of heterogeneity: size, sector, customer orientation, and sales channel. Out of the total 1,552 respondents, 920 are small firms (2–49 employees), 441 medium-sized (50–249), and 191 large (250 or more employees). By sector, 457 operate in manufacturing, 300 in retail trade, and 669 in other services excluding retail. Regarding customer orientation, 789 firms generate more than half of their turnover with other firms (“B2B”), while 570 sell primarily to private consumers (“B2C”). Finally, by sales channel, 1,198 firms rely mainly on offline channels (10% or less of turnover from online sales), while 285 derive more than 10% of

turnover from e-commerce.

To examine whether these dimensions are related, the table also reports their joint distribution. The diagonal blocks confirm internal consistency within each dimension, while the off-diagonal shares reveal some notable patterns. For example, large firms are more often found in manufacturing (38.0%) and less so in retail (11.7%), whereas small firms are relatively more common in retail (28.8%) and services (46.6%). Medium-sized firms are strongly represented in manufacturing (44.8%) but much less in retail (9.1%). Manufacturing firms tend to serve B2B customers (94.4%) and operate mainly offline (89.1%), while retail firms are strongly associated with B2C customers (83.2%). Online sales are somewhat more prevalent among service firms (26.7%) compared to manufacturing (10.9%). These observations suggest that certain characteristics frequently co-occur, but no single dimension fully explains the variation, supporting the view that heterogeneity is multidimensional.

Beyond these core dimensions, the table also summarizes additional characteristics of the responding firms. The main market for most companies is domestic: on average, firms generate 83% of their turnover from sales of their main product or service in Switzerland, 11% from the euro area, and 6% from the rest of the world. This domestic orientation is strongest in the retail sector (97%) and least pronounced in manufacturing (63%). The relatively low overall export share (17%) reflects the broad sectoral coverage of the survey, which includes services, construction, and public sectors that are largely domestically oriented. For manufacturing firms only, the average export share rises to 27%, which is much closer to expectations for export-intensive industries. In terms of customer type, respondents report earning the largest share of turnover from other companies (53%), followed by private consumers (38%) and government agencies (9%). Manufacturing firms are predominantly business-to-business (86%), while retail firms earn over three-quarters of turnover from private consumers. Other service providers are more balanced, selling almost equally to firms and consumers. Across all sectors, most companies do business with customers with whom they expect to do business again (“regular customers”), while fewer than 10% indicate doing business with “occasional customers.” The customer relationship is particularly close in manufacturing and less so among service providers and firms with a higher share of online sales.

Sales channels are predominantly offline (88%), with online channels accounting

for an average of 11% of turnover. Online sales represent more than twice the share in services (15%) and retail (13%) than in manufacturing (6%). Regarding sourcing, more than half of firms report no imports of inputs for their main product or service. Among those that import, 43% source from the euro area and 5% from other countries. Import dependence is highest in manufacturing, where 71% of firms source inputs from the euro area and 7% from outside Europe.

Market concentration is generally low: 55% of firms estimate their market share at below 10%, whereas 16% report holding more than half of the total market. Competitive pressure is high—45% of respondents face 20 or more competitors for their main product or service. Competition is more intense in retail and services (over 50% of firms report 20 or more competitors) than in manufacturing (30%).

Table A.4. Characteristics of the firms participating in the Price-Setting Survey

	Total	S	Size M	L	Sector			Customer		Channel	
					Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Respondents	1552	920	441	191	457	300	669	789	570	1198	285
<i>Size</i>											
S	59.3	100.0	0.0	0.0	45.3	80.7	58.6	52.1	70.5	58.8	62.1
M	28.4	0.0	100.0	0.0	39.8	12.3	28.0	35.2	19.1	29.7	24.9
L	12.3	0.0	0.0	100.0	14.9	7.0	13.5	12.7	10.4	11.4	13.0
<i>Sector</i>											
Manufacturing	32.0	24.6	44.8	38.0	100.0	0.0	0.0	54.3	4.5	36.2	17.3
Retail	21.0	28.8	9.1	11.7	0.0	100.0	0.0	6.4	43.1	21.1	21.9
Services	46.9	46.6	46.1	50.3	0.0	0.0	100.0	39.4	52.4	42.7	60.8
<i>Customer</i>											
B2B	58.1	50.6	71.8	62.9	94.4	16.8	50.8	100.0	0.0	60.2	50.4
B2C	41.9	49.4	28.2	37.1	5.6	83.2	49.2	0.0	100.0	39.8	49.6
<i>Channel</i>											
Offline	80.8	79.9	83.4	78.7	89.1	79.0	73.3	83.5	77.2	100.0	0.0
Online	19.2	20.1	16.6	21.3	10.9	21.0	26.7	16.5	22.8	0.0	100.0
<i>Turnover by region</i>											
CH	83.3	88.4	76.9	73.4	62.9	97.2	88.6	73.3	95.1	83.5	83.4
Euro area	10.8	7.6	14.6	17.1	24.2	2.0	7.2	17.6	3.1	10.5	11.3
Other countries	5.6	3.5	8.4	9.6	12.7	0.8	3.8	9.1	1.6	5.7	5.3
<i>Turnover by customer</i>											
Firms	52.8	47.0	63.3	56.8	86.0	20.8	45.5	89.0	9.7	54.6	45.9
Consumers	38.3	45.1	26.6	32.2	7.9	76.6	42.8	6.1	87.0	36.3	45.8
Government	8.5	7.4	9.9	11.0	5.9	2.6	11.0	5.0	3.2	8.6	8.3
<i>Turnover by channel</i>											
Offline	87.8	86.4	91.1	87.3	93.2	87.2	82.9	89.9	86.2	97.0	49.8
Online	10.8	11.7	8.5	11.6	5.9	12.5	14.7	9.4	12.4	1.4	50.2
<i>Customer type</i>											
Regular	90.7	90.2	93.3	87.0	96.2	88.9	87.9	97.4	83.2	91.6	87.6
Occasional	9.3	9.8	6.7	13.0	3.8	11.1	12.1	2.6	16.8	8.4	12.4
<i>Regions of imports for inputs</i>											
No	52.7	59.3	43.7	42.0	22.5	52.9	71.1	39.5	67.9	52.2	53.5
Euro area	42.6	36.5	50.8	53.6	70.6	41.3	25.7	54.5	28.4	43.3	40.8
Other countries	4.6	4.3	5.5	4.4	7.0	5.8	3.2	6.0	3.7	4.5	5.6
<i>Market share</i>											
0%–4%	39.3	46.9	31.0	21.8	26.1	50.3	43.3	33.5	49.0	40.7	34.9
5%–9%	13.5	11.8	17.0	13.4	18.0	12.0	11.0	15.7	10.1	13.5	14.0
10%–24%	17.2	12.3	22.1	29.1	23.1	13.4	15.4	20.5	12.4	17.1	17.6
25%–49%	14.2	11.0	17.0	23.5	20.0	11.3	12.4	16.8	11.3	12.9	18.0
50%–100%	15.8	18.0	12.8	12.3	12.8	13.0	18.0	13.5	17.2	15.8	15.5
<i>Number of competitors</i>											
0	3.2	3.7	2.5	2.2	1.1	2.0	4.8	1.9	4.1	2.9	3.2
1–4	13.9	12.7	16.8	13.0	15.8	13.3	14.2	13.9	14.9	13.4	16.6
5–9	24.8	23.2	26.7	27.7	38.0	22.8	18.0	27.8	19.7	25.7	21.2
10–19	13.5	11.2	15.7	20.1	15.1	11.6	12.6	15.7	10.1	12.9	17.0
20+	44.6	49.2	38.2	37.0	30.0	50.3	50.5	40.7	51.2	45.2	42.0

Notes: This table reports the characteristics of firms participating in the Price-Setting Survey. Figures show the share of responding firms (in percent) with the respective characteristic. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

## A.2 Questionnaire of the Price-Setting Survey

### Introduction

This survey examines how Swiss companies determine the prices for their products or services and what factors influence the price-setting process. It is divided into four sections:

- Section A asks general questions about your company and its main products and services.
- Section B collects information about how your company sets prices for its products or services.
- Section C collects information about price changes and factors that influence your decision to adjust prices.
- Section D addresses factors that may cause delays in price adjustments.

Explanation of important terms in the survey:

**Price** Throughout the survey, the term “price” refers to the actual transaction sales price, not the list price. Therefore, if discounts from the list price are common in your industry, refer to the after-discount price of your product or service. Final transaction prices in certain industries offering services or customized products may be largely a function of the work involved. If this applies to your firm, refer to your hourly or daily charge out rate as the price.

**Product/service** Since your company probably sells many different products or services, it is difficult to generalize the answers to the questions for all products or services. For this reason, we would like you to refer to a product or service that best represents the company. Therefore, please answer the following questions for your main product or service or a product or service that is typical for your company. In the questionnaire, this product or service is simply referred to as “product/service.”

### General information

1. What percentage of sales of your main product/service is generated in the following areas?

- (a) Switzerland: \_\_\_\_\_ %
- (b) Euro-area countries: \_\_\_\_\_ %
- (c) Other countries: \_\_\_\_\_ %

**2. What percentage of sales of your main product/service is generated through the following channels?**

- (a) Offline: \_\_\_\_\_ %
- (b) Online: \_\_\_\_\_ %

**3. What percentage of sales of your main product/service is generated by the following customers?**

- (a) Businesses: \_\_\_\_\_ %
- (b) Private consumers: \_\_\_\_\_ %
- (c) Government: \_\_\_\_\_ %

**4. The profit margin of your main product/service over the last five years has**

- Increased
- Remained unchanged
- Decreased

**5. Are most of the customers of your main product/service regular customers, with whom you expect to do business again, or occasional customers, whom you do not expect to be repeated customers?**

- Regular customers
- Occasional customers

**6. Do you import inputs to create your product/service or your product/service itself?**

- Yes, mostly from the euro area
- Yes, mostly from other countries
- No

**7. What is your market share<sup>12</sup> in your main market?**

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<sup>12</sup>The market share is measured by sales of our main product/service as a proportion of total sales of that product/service in the market.

- Less than 5%
- Between 5% and 10%
- Between 10% and 25%
- Between 25% and 50%
- Over 50%

**8. How many competitors are there in the main market for your main product/service?**

- None
- Less than 5 competitors
- Between 5 and 10 competitors
- Between 10 and 20 competitors
- More than 20 competitors

**9. Competition in the main market for your main product/service over the last five years has**

- Increased
- Remained unchanged
- Decreased

**Information regarding price formation**

**10. Who determines the price of your main product/service?**

- We determine the price ourselves.
- The price is determined through negotiations/contracts with the customer.
- The price is determined through negotiations/contracts with the supplier.
- The parent company determines the price.
- The government determines the price.

**11. What determines whether you review the price of your main product/service (*without necessarily changing it*)?**

- Review in regular time intervals

- Review in regular time intervals, but also in response to specific events (e.g., a considerable change in costs)
- Review in response to specific events (e.g., a considerable change in costs)

**12. How often do you review the price of your main product/service (*without necessarily changing it*)?**

- Several times a day
- Daily
- Weekly
- Monthly
- Quarterly
- Semi-annually
- Yearly

**13. How applicable are the following statements to the way you price your product/service? fully applicable ——— fully inapplicable**

- (a) We determine the price using rules of thumb (e.g., indexation to the national consumer price index).
- (b) We determine our price by adding a constant mark-up on calculated unit costs.
- (c) We determine our price by adding a variable mark-up on calculated unit costs, depending on market conditions.
- (d) We determine our price by considering the prices of our competitors.
- (e) We determine our price by considering customer demand and the perceived value customers derive from purchasing our main product/service.
- (f) We determine our price by adding a constant mark-up on calculated unit costs.
- (g) We determine the price based on information about the *past behavior* of all variables relevant for price determination.
- (h) We determine the price based on information about the *current behavior* of all variables relevant for price determination.

- (i) We determine the price based on information about the *future expected behavior* of all variables relevant for price determination.
14. The price of your product/service: Yes —— No
- (a) varies across geographical markets in Switzerland
  - (b) differs across customers (“personalized pricing”)
  - (c) depends on the quantity sold
  - (d) is determined case by case
  - (e) differs whether the product/service is sold via the internet (“online”) or stationary (“offline”)
  - (f) depends on real-time market dynamics or the time of the day (“dynamic pricing”)
15. To what extent are the following aspects of price formation of your main product/service automated? Here, automation means that decisions are taken without human interaction. Yes —— No
- (a) The price comparison with our competitors is automated.
  - (b) The decision to review the price is automated.
  - (c) The price calculation is automated.
  - (d) The decision to change the price is automated.
16. How has the introduction of digital technologies affected the following aspects of your pricing? Increased —— Decreased
- (a) Ability to change prices more frequently
  - (b) Ability to compare prices to competitors’ prices
  - (c) Profit margin
  - (d) Cost of labor
17. What impact do you expect the introduction of digital technologies by your own company and by other parties to have on the price of your product/service in the next three years? The price of your product/service will due to the introduction of digital technologies  
Significantly increase ———— Significantly decrease

- (a) **by your own company**
- (b) **by other parties (i.e., suppliers, customers and competitors)**

**Information regarding price changes**

**18. 18. How often do you *change* the price of your main product/service?**

- Several times a day
- Daily
- Weekly
- Monthly
- Quarterly
- Semi-annually
- Yearly

**19. To the best of your knowledge, has the frequency of price adjustments changed in the past decade?**

- Yes, we change prices more frequently today.
- Yes, we change prices less frequently today.
- No, it has not changed.

**20. Over the next 3 years, do you expect the frequency of price adjustments to change in your company?**

- Yes, we expect to change prices more frequently than today.
- Yes, we expect to change prices less frequently than today.
- No, we don't expect it to change.

**21. The probability of changing the price of your product/service**

- Is higher if the price has been changed recently than if the price has not been changed for a long time.
- Is higher if the price has not been changed for a long time than if the price has been changed recently.
- Is independent of the time of previous price changes.

**22. When you adjust the price of your product/service, do you also change the prices of other products/services at the same time?**

- Yes, we change the prices of *all* products/services at the same time.
- Yes, we change prices for *most* products/services at the same time.
- Yes, we change prices for *some* products/services at the same time.
- No, we change prices for *only one* product/service at a time.

**23. When your competitors adjust the price of their product/service, do you also change the price of your product/service at the same time?**

- We *always* change the price of our product/service at the same time.
- We *usually* change the price of our product/service at the same time.
- We *rarely* change the price of our product/service at the same time.
- We *do not* change the price of our product/service at the same time.

**24. For your main product/service, how important is each of the following factors in motivating a price *increase*?**

Very important ——— Totally unimportant

- (a) Increase in labor costs (e.g., negotiated wage increase)
- (b) Increase in financing costs
- (c) Increase in the cost of raw materials
- (d) Increase in energy and fuel prices
- (e) Increase in exchange rate
- (f) Increase in suppliers' prices
- (g) Decrease in our productivity
- (h) Demand increase
- (i) Demand increase
- (j) Price increase by a competitor
- (k) Product improvement (e.g., quality, design)
- (l) The intention of gaining market share

**25. For your main product/service, how important is each of the following factors in motivating a price *decrease*?**

Very important ——— Totally unimportant

- (a) Decrease in labor costs (e.g., negotiated wage increase)

- (b) Decrease in financing costs
- (c) Decrease in the cost of raw materials
- (d) Decrease in energy and fuel prices
- (e) Decrease in exchange rate
- (f) Decrease in suppliers' prices
- (g) Increase in our productivity
- (h) Demand increase
- (i) Demand reduction
- (j) Price reduction by a competitor
- (k) Product improvement (e.g., quality, design)
- (l) The intention of gaining market share

**Information regarding price rigidities**

**26. Sometimes companies decide not to change the price of their product/service. There are often a variety of reasons for this. Some of them are listed below. How important are the following reasons for *not* changing the price of your product/service to your company? Please neglect here any special effects of the COVID-19 pandemic on your pricing policy.**

Very important ——— Totally unimportant

- (a) We are hesitant to change prices for fear that our competitors will not follow suit.
- (b) We do not change the price because the next price adjustment can be made only after a certain period of time.
- (c) We fear that we need to revise the price in opposite direction soon after adjusting prices.
- (d) We have fixed contracts that limit our ability to change prices.
- (e) Our customers expect a stable price, and more frequent changes could damage customer relationships.
- (f) We set prices at commercially attractive price points (e.g. CHF 9.90 instead of CHF 10.10) and only change them when it is convenient to move to a new attractive threshold.

- (g) It is costly in terms of time or money to gather all relevant information for pricing decisions.
- (h) It is costly for us to change prices (e.g., new catalogs, changing price tags).
- (i) We change prices when we realize that costs changed.
- (j) We prefer to vary other elements of our products or services (e.g., warranty, delivery lag, customer services) rather than change prices.
- (k) We don't reduce prices because our customers may take this as a reduction in the quality of our product or service.
- (l) Delays within our organization slow down pricing decisions.
- (m) Low inflation makes large price changes more noticeable.
- (n) We are reluctant to change the price if we are uncertain about the future development of our business situation.
- (o) We loose many customers when raising the price but gain only a few new customers when cutting it.
- (p) Are there any important reasons other than those listed above? If yes, please specify: \_\_\_\_\_

27. Please answer the following question with regard to any special effects of the COVID-19 pandemic on your pricing policy. How important were the following reasons for *not* changing the price of your product/service for your company *during the COVID-19 pandemic*?

Very important ——— Totally unimportant

- (a) We are hesitant to change prices for fear that our competitors will not follow suit.
- (b) We do not change the price because the next price adjustment can be made only after a certain period of time.
- (c) We fear that we need to revise the price in opposite direction soon after adjusting prices.
- (d) We have fixed contracts that limit our ability to change prices.
- (e) Our customers expect a stable price, and more frequent changes could damage customer relationships.

- (f) We set prices at commercially attractive price points (e.g. CHF 9.90 instead of CHF 10.10) and only change them when it is convenient to move to a new attractive threshold.
- (g) It is costly in terms of time or money to gather all relevant information for pricing decisions.
- (h) It is costly for us to change prices (e.g., new catalogs, changing price tags).
- (i) We change prices when we realize that costs changed.
- (j) We prefer to vary other elements of our products or services (e.g., warranty, delivery lag, customer services) rather than change prices.
- (k) We don't reduce prices because our customers may take this as a reduction in the quality of our product or service.
- (l) Delays within our organization slow down pricing decisions.
- (m) Low inflation makes large price changes more noticeable.
- (n) We are reluctant to change the price if we are uncertain about the future development of our business situation.
- (o) We lose many customers when raising the price but gain only a few new customers when cutting it.

## B. Further Results from the Price-Setting Survey

Table B.1 shows the percentage of companies for which the price of their main product or service varies fully or partly across geographical markets in Switzerland (“by region”), differs across customers (“by customer”), depends on the quantity sold (“by quantity sold”), differs whether the product or service is sold via the internet (“by channel”), or depends on real-time market dynamics or the time of the day (“by time”).

Table B.1. Price discrimination

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
By region	42.5	48.9	32.6	47.0	16.4	29.8	43.7	39.5	44.5	45.1	33.3
By customer	72.9	71.6	69.7	75.0	84.3	7.9	69.4	84.3	57.9	72.2	74.5
By quantity	67.0	71.6	67.3	66.0	88.3	45.7	58.9	83.1	38.9	65.8	71.4
By channel	16.9	12.4	13.1	20.1	17.6	22.4	19.2	18.3	17.6	10.1	39.2
By time	23.4	19.5	17.9	27.4	14.2	20.1	21.7	29.4	20.4	21.1	33.5

*Notes:* This table shows the percentage of companies for which the price of their main product or service varies fully or partly across geographical markets in Switzerland (“by region”), differs across customers (“by customer”), depends on the quantity sold (“by quantity sold”), differs whether the product or service is sold via the internet (“by channel”), or depends on real-time market dynamics or the time of the day (“by time”). The options are not mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

Table B.2 presents the share of companies reporting that the introduction of digital technologies has increased, left unchanged, or decreased various aspects of their price setting, including the frequency of price changes, the ability to compare prices with competitors, profit margins, and labor costs.

Table B.2. Effect of digitization on aspects of price setting

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
<i>Ability to change prices more frequently</i>											
Increased	22.6	27.5	19.9	23.2	31.4	58.7	19.4	23.4	22.0	20.2	28.1
Remained unchanged	76.8	71.8	79.3	76.4	68.2	41.3	80.2	76.3	77.1	79.0	71.9
Decreased	0.6	0.7	0.8	0.4	0.4	0.0	0.4	0.3	0.8	0.8	0.0
<i>Ability to compare prices to competitors' prices</i>											
Increased	17.6	23.7	16.4	17.0	17.0	44.1	15.9	15.9	20.8	13.1	31.5
Remained unchanged	81.9	75.3	82.3	83.0	82.4	55.9	84.0	83.4	79.0	86.2	68.4
Decreased	0.5	1.0	1.3	0.0	0.6	0.0	0.1	0.7	0.2	0.7	0.1
<i>Profit margin</i>											
Increased	9.4	9.5	13.9	6.7	11.6	6.1	9.5	10.1	6.8	6.6	16.1
Remained unchanged	77.1	75.9	75.4	78.4	83.0	63.7	75.6	79.1	71.8	79.5	72.2
Decreased	13.5	14.7	10.6	14.9	5.4	30.2	14.9	10.8	21.5	13.9	11.7
<i>Cost of labor</i>											
Increased	15.2	13.6	17.2	14.4	9.7	4.8	17.3	14.4	18.3	14.0	18.9
Remained unchanged	73.5	72.2	68.0	77.0	77.3	77.2	71.7	75.2	74.3	76.1	68.3
Decreased	11.3	14.2	14.8	8.6	13.0	18.0	11.0	10.5	7.4	9.9	12.7

Notes: This table presents the share of companies reporting that the introduction of digital technologies has increased, left unchanged, or decreased various aspects of their price setting, including the frequency of price changes, the ability to compare prices with competitors, profit margins, and labor costs. The options are not mutually exclusive. The column "Total" reports results for all respondents. The "Size" columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The "Sector" columns classify results into manufacturing, retail trade, and other services excluding retail. The "Customer" columns differentiate between firms that generate more than half of their sales with other firms ("B2B") and those that generate more than half with private consumers ("B2C"). The "Channel" columns distinguish between firms deriving more than 10% of their turnover from online sales ("Online") and those deriving 10% or less from e-commerce ("Offline").

Table B.3 reports weighted implied monthly frequencies of price reviews and price changes for firms that automate a given dimension of price setting versus those that do not.

Table B.3. Automation and frequency of price reviews and changes

Automation dimension	Price review (implied monthly frequency)		Price change (implied monthly frequency)	
	Automated	Not automated	Automated	Not automated
Price calculation	45.0	36.2	39.1	26.3
Price change	52.9	37.6	44.3	29.5
Competitor comparison	48.6	38.0	38.8	30.1
Price review	51.4	36.5	39.9	29.2

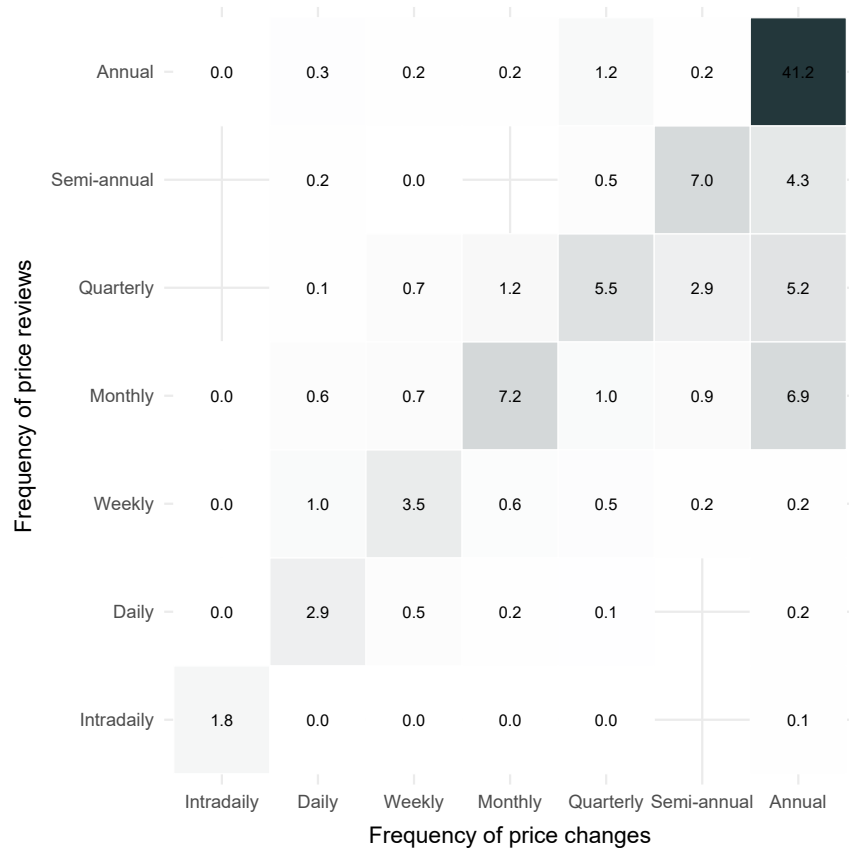
Notes: This table reports weighted implied monthly frequencies of price reviews and price changes for firms that automate a given dimension of price setting versus those that do not. Frequencies are computed by mapping categorical responses to monthly probabilities (intradaily/daily/weekly/monthly = 1; quarterly = 1/3; semi-annually = 1/6; yearly = 1/12). Values represent lower bounds. Automation dimensions are not mutually exclusive.

I assess whether firms that review prices more frequently also change prices more frequently. Both measures are ordered categorical survey items, with categories: 1 intradaily, 2 daily, 3 weekly, 4 monthly, 5 quarterly, 6 semi-annual, 7 annual.

Figure B.1 shows the survey-weighted joint distribution of review and change fre-

quency categories. The joint distribution is concentrated on or near the diagonal (exact diagonal mass 69.1 percent, diagonal  $\pm 1$  mass 82.2 percent), indicating that firms that review more often also change prices more often. The survey-weighted Pearson correlation based on implied monthly frequencies is  $r = 0.69$ , confirming a strong positive association between monitoring and implementation frequencies.

Figure B.1. Joint distribution between the frequency of price reviews and the frequency of price changes



Notes: The heatmap shows the survey-weighted joint distribution of review and change frequency categories. Categories: 1 intradaily, 2 daily, 3 weekly, 4 monthly, 5 quarterly, 6 semi-annual, 7 annual.

The upper panel of [Table B.4](#) presents the share of companies reporting an increase, no change, or a decrease in the frequency of price adjustments for their main product or service over the past decade. The lower panel presents the corresponding expectations for the next three years.

Table B.4. Change in the frequency of price changes

	Total	Size			Sector			Customer		Channel	
		S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
<i>Over the past decade, the frequency of price changes has ...</i>											
Increased	30.5	40.1	34.2	26.6	45.4	44.3	26.1	41.1	24.5	29.2	35.4
Remained unchanged	68.0	57.7	63.1	72.6	52.3	53.2	72.3	57.7	73.3	69.1	64.0
Decreased	1.6	2.2	2.7	0.8	2.3	2.6	1.6	1.2	2.2	1.7	0.6
<i>Over the next 3 years, the frequency of price changes is likely to ...</i>											
Increase	35.2	39.2	39.9	31.8	49.2	50.7	33.4	43.0	32.6	33.7	45.3
Remain the same	63.5	57.7	59.0	67.1	49.3	39.1	65.5	55.6	66.4	65.2	54.5
Decrease	1.3	3.1	1.1	1.2	1.5	10.2	1.1	1.3	1.0	1.1	0.2

*Notes:* The upper panel presents the share of companies reporting an increase, no change, or a decrease in the frequency of price adjustments for their main product or service over the past decade. The lower panel presents the corresponding expectations for the next three years. The options are not mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

Table B.5 shows the importance of each of the theories tested (Table 12) as a reason for Swiss companies not to change the price of their main product or service. Numbers are weighted average scores across answer choices, ranging from 1 (“totally unimportant”) over 2 (“of minor importance”) and 3 (“moderately important”) to 4 (“very important”).

Table B.5. Importance of theories that explain price stickiness

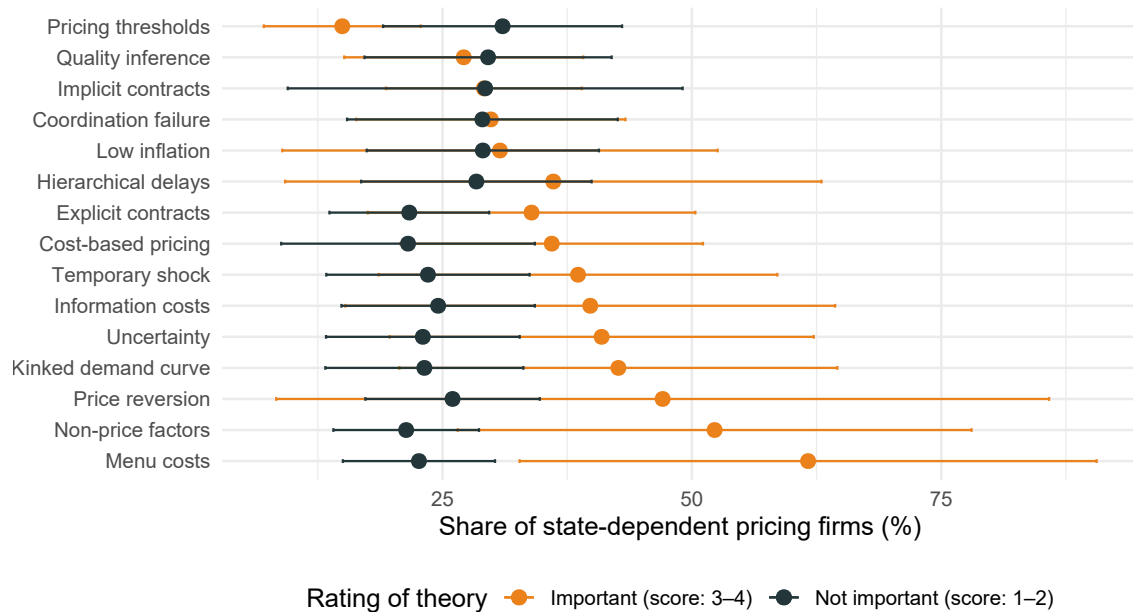
	Size				Sector			Customer		Channel	
	Total	S	M	L	Manufacturing	Retail	Services	B2B	B2C	Offline	Online
Explicit contracts	2.7	2.3	2.7	2.8	2.7	1.8	2.8	2.7	2.7	2.8	2.7
Implicit contracts	2.7	2.8	2.8	2.6	2.9	2.8	2.7	2.8	2.6	2.7	2.6
Coordination failure	2.2	2.2	2.1	2.2	2.4	2.9	2.1	2.4	2.0	2.2	2.0
Cost-based pricing	2.7	2.7	2.8	2.6	3.1	2.6	2.5	2.9	2.3	2.7	2.6
Kinked demand curve	2.1	2.3	2.1	2.1	2.1	2.3	2.1	2.3	2.0	2.1	2.2
Hierarchical delays	1.7	1.6	1.6	1.8	1.8	1.8	1.6	1.8	1.5	1.7	1.5
Low inflation	1.8	1.9	1.8	1.8	1.8	2.0	1.8	1.9	1.6	1.8	1.8
Menu costs	1.7	1.6	1.6	1.8	1.8	1.9	1.7	1.8	1.6	1.6	1.9
Information costs	2.0	2.0	1.9	2.1	2.2	2.2	2.0	2.2	1.9	2.0	2.1
Non-price factors	1.8	1.9	1.8	1.9	1.7	1.4	1.8	2.0	1.6	1.8	1.9
Quality inference	1.8	2.0	1.9	1.7	1.8	1.7	1.8	1.9	1.7	1.8	1.8
Price reversion	1.9	1.9	1.8	1.9	1.9	2.2	1.8	2.0	1.6	1.8	2.0
Temporary shock	2.2	2.1	2.3	2.2	2.3	2.4	2.2	2.3	2.2	2.2	2.2
Pricing thresholds	1.7	1.8	1.6	1.7	1.5	3.0	1.7	1.7	1.8	1.7	1.7
Uncertainty	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.2	1.8	2.0	2.1

Notes: This table shows the importance of each of the theories tested (Table 12) as a reason for Swiss companies not to change the price of their main product or service. Numbers are weighted average scores across answer choices, ranging from 1 (“totally unimportant”) over 2 (“of minor importance”) and 3 (“moderately important”) to 4 (“very important”). The options are not mutually exclusive. The column “Total” reports results for all respondents. The “Size” columns distinguish between small firms (2–49 employees), medium-sized firms (50–249 employees), and large firms (250 or more employees). The “Sector” columns classify results into manufacturing, retail trade, and other services excluding retail. The “Customer” columns differentiate between firms that generate more than half of their sales with other firms (“B2B”) and those that generate more than half with private consumers (“B2C”). The “Channel” columns distinguish between firms deriving more than 10% of their turnover from online sales (“Online”) and those deriving 10% or less from e-commerce (“Offline”).

To complement the analysis of price rigidity, Figure B.2 examines whether firms that consider a given reason for price rigidity important differ in their review rule—specifically, whether they rely on state-dependent rather than time-dependent pricing. This provides an additional check on the interpretation that certain reasons align with time-dependent behavior while others correspond to state-dependent adjustment regimes.

The analysis uses the survey question on review triggers, which distinguishes between time-dependent (calendar-based), state-dependent (event-triggered), and mixed approaches. For clarity, the figure below focuses on firms that report a pure time-dependent or state-dependent rule, excluding mixed responses. For each reason, I compute the weighted share of firms using state-dependent pricing among those that rate the reason as important (scores 3–4: “moderately important” or “very important”) and those that rate it as not important (scores 1–2: “totally unimportant” or “of minor importance”).

Figure B.2. Share of state-dependent pricing by importance of reasons for price rigidity



*Notes:* The figure compares the share of firms using state-dependent pricing between those that consider a reason important (scores 3–4) and those that do not (scores 1–2). Points show weighted shares; error bars indicate 95% confidence intervals. When the blue point lies to the right of the orange point, firms rating the reason as important are more likely to use state-dependent pricing.

Several patterns emerge. At the top of the chart, reasons such as menu costs, non-price factors, and price reversion show the largest differences: firms rating these reasons as important are far more likely to use state-dependent pricing (e.g., menu costs: 62% vs. 23%; non-price factors: 52% vs. 21%; price reversion: 47% vs. 26%). Other reasons associated with higher state-dependent shares include kinked demand (43% vs. 23%), uncertainty (41% vs. 23%), information costs (40% vs. 25%), temporary shock (39% vs. 24%), cost-based pricing (36% vs. 22%), and explicit contracts (34% vs. 22%). These patterns suggest that firms emphasizing operational frictions, informational costs, or competitive dynamics tend to monitor prices and adjust in response to events, consistent with state-dependent behavior—even when formal constraints (e.g., contracts) limit implementation flexibility.

By contrast, at the bottom of the chart, differences are small for low inflation (31% vs. 29%) and coordination failure (30% vs. 29%), while implicit contracts show

virtually no gap (29%). Two reasons tilt toward less state-dependent behavior among firms that deem them important: quality inference (27% vs. 30%) and pricing thresholds (15% vs. 31%). These latter patterns align with time-dependent or interval-based adjustment, where firms wait for convenient price points or avoid frequent changes to preserve perceived quality.

Overall, the evidence confirms a systematic link between the importance of reasons for price rigidity and firms' review rules. Reasons tied to informational frictions, menu costs, and competitive pressures correspond to higher state-dependent shares, while psychological pricing and quality concerns align with time-dependent behavior. Contractual constraints show a mixed picture: they are important for many firms, yet those same firms often report event-triggered reviews, suggesting that monitoring and implementation regimes can diverge.