

# Prices and inflation in Austria during the COVID-19 crisis – an analysis based on online price data

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To shed light on price developments during the early stage of the COVID-19 pandemic in Austria, we analyze online price data collected from April to August 2020 by means of web-scraping. Our analysis focuses on product categories that received special attention during the COVID-19 crisis, such as food and medical products. In contrast to what has been reported in the media, we find only small price changes for most product categories over the observation period. For food, nonalcoholic beverages, personal care products and IT equipment, we find small price decreases. Prices for alcoholic beverages remained broadly stable. Medical products and delivered meals saw very small price increases. When comparing price changes derived from our online price dataset with monthly price changes as reported in official inflation statistics, we find similarities for some product categories but also considerable differences for others. These differences are most likely attributable to methodological differences in data collection. For the analysis of price developments, we find that webscraped data are a useful data source complementary to data from official inflation statistics.

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The COVID-19 pandemic and the accompanying policy measures have affected the Austrian economy in multiple ways. On the one hand, the supply side of the economy has been severely hit by shutdowns and other public health measures. Supply chains had to be adapted and new ways of cooperation had to be found. As a result, more people than ever are working from home. At the same time, the grim economic outlook led to mass layoffs, rising unemployment and a high number of persons in short-time work.

On the other hand, the demand side of the economy has been hit as well. A combination of lower income due to unemployment on the one hand and changing consumption patterns and consumer expectations on the other has dampened demand. While demand for some goods and services has decreased, demand for other goods has gone up (see e.g. Baker et al., 2020). In Austria, for example, the media reported anecdotal evidence of toilet paper and pasta hoarding during the first lockdown in March 2020.<sup>2</sup> Moreover, rising demand for medical equipment, such as protective clothing, face masks and testing equipment, has led to shortages all around the world.

It follows almost directly that these supply and demand shocks have affected prices as well. Typically, falling demand leads to lower prices while disruptions of

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<sup>2</sup> <https://kurier.at/chronik/oesterreich/konserven-nudeln-klopapier-erste-hamsterkaeufe-in-oesterreich/400763904>.

supply chains have the opposite effect. However, when demand and supply shocks occur simultaneously, as in the current COVID-19 pandemic, their overall effect on prices is ambiguous. Moreover, prices and consequently also inflation may adjust slowly to a changing environment because of nominal rigidities.

Furthermore, the COVID-19 pandemic also led to difficulties in collecting price data for inflation measurement. Many stores were closed for several weeks and many products were out of stock due to supply chain-related problems. As a result, statistical offices had to rely on alternative data collection methods. Apart from performing imputations and using scanner data, statistical offices started to implement or expand online price data collection. To ensure a harmonized approach across the EU, Eurostat published guidance notes on the techniques to be used for imputations and replacements.<sup>3</sup> The UK's Office for National Statistics, for instance, included online price data in their collection of short-term economic indicators. Germany's Statistisches Bundesamt and Statistics Austria incorporated online price data in their inflation measurement during the first COVID-19 lockdown. Other institutions, such as central banks, have also started to gain interest in online price data. Within the framework of the Price Setting Microdata Analysis (PRISMA) research network<sup>4</sup>, the OeNB started to collect online price data in April 2020 to shed light on price developments during the COVID-19 pandemic. The method used to collect these data is webscraping<sup>5</sup>. Over the last two decades, e-commerce has become an ever more important distribution channel of the retail industry. In Austria, the share of turnover generated in e-commerce as a percentage of the total turnover in the retail sector amounted to about 14% in 2019.<sup>6</sup> During the COVID-19 pandemic this share has very likely increased substantially which makes webscraping an even more important method of collecting price data.

In this paper, we use these webscraped price data to analyze the development of prices for selected product categories in the period from April to August 2020. Section 1 provides information on the data used in our analysis; section 2 presents the results of our analysis and, in a box, the results of an analysis of price developments in reaction to consumption tax cuts. Finally, section 3 draws some conclusions.

## 1 Data

In the following, we analyze price developments in recent months for certain product categories based on the United Nations Statistics Division's Classification of Individual Consumption by Purpose (COICOP) concept. More specifically, due to their relevance during the COVID-19 crisis and the high representativity of the data we collected in these product categories, our analysis focuses on the following COICOP categories: food; nonalcoholic beverages; alcoholic beverages; audio-

<sup>3</sup> <https://ec.europa.eu/eurostat/en/data/metadata/covid-19-support-for-statisticians>.

<sup>4</sup> PRISMA is a joint research network the ECB and the euro area national central banks set up to investigate price setting patterns in the euro area countries with the help of micro data.

<sup>5</sup> Webscraping refers to the automatic download of large amounts of data from the internet. These data are collected at regular intervals for analytical purposes; in our case, price data were collected from online shops. Apart from supporting the analysis of short-term price trends, webscraping also opens up the possibility of investigating other relevant questions in inflation research, such as whether e-commerce has a dampening effect on inflation or whether the collected data are suitable for forecasting and nowcasting the inflation rate.

<sup>6</sup> According to Eurostat data on the use of e-commerce by enterprises and individuals. For a cross-country comparison of the shares of e-commerce, see Ritzberger-Grünwald and Rumler (2019).

visual, photographic and information processing equipment (in the following referred to as “IT equipment”); medical products, appliances and equipment (in the following referred to as “medical products”); and personal care products. In addition, our analysis also covers price developments in online meal delivery services, which are not part of the consumer price index (CPI) or of the Harmonised Index of Consumer Prices (HICP) basket<sup>7</sup> of goods and services for Austria. The online price data we collected stem primarily from two supermarkets, one drugstore, two electronics stores, one pharmacy and one meal delivery service provider.<sup>8</sup> The online shops in our sample set uniform prices for the whole of Austria, with the exception of the meal delivery service provider, which offers local prices as it cooperates with about 3,350 different catering businesses all over Austria. About 50% of these catering businesses are located in Vienna, about 10% each in Lower Austria and Styria, and the remaining 30% in other Austrian provinces. Even though we also webscrape price data from clothing stores, we do not include these data in our analysis given problems connected to product churn<sup>9</sup>.

Since we only started collecting online price data in April 2020, the observation period for most product categories is from April 1 to August 31, 2020. Given this fairly short observation period and the lack of data from previous years, we were not able to calculate year-on-year inflation or interpret seasonal price patterns. Instead, after constructing daily price indices for each product category, we analyzed changes in price levels based on these indices.

To render a broad picture of developments in the many individual prices on which data were collected, we aggregated our price indices to the level of COICOP 3-digit groups.<sup>10</sup> Given the rather sudden start of our project during the early stages of the COVID-19 crisis, we gradually expanded our sample of online shops covered by including additional stores (see table A1 in the annex). In some cases, the inclusion of new stores in our sample led to a major change in the number and type of products covered in certain COICOP 3-digit categories. Consequently, we treated these new entries into the sample as data breaks and recalibrated the index to 1 on the day the major changes occurred. This was the case on June 17, 2020, for medical products and personal care products (inclusion of a pharmacy in the sample) and on June 18, 2020, for IT equipment (inclusion of a second electronics store).

Before turning to the results of our analysis, it seems appropriate to point out that there are considerable differences between collecting price data for official

<sup>7</sup> The CPI is the national indicator measuring inflation in Austria for Austrian residents; the HICP follows an EU-wide, harmonized methodology facilitating cross-country comparison and measures inflation in Austria regardless of residency, i.e. also including the demand of foreign tourists in Austria. The underlying price data are the same for both indices but the weighting of goods and services differs.

<sup>8</sup> Before scraping their prices, the online shops were informed about our plans to collect their prices giving them the possibility to object to being scraped. For reasons of confidentiality, the names of these shops are not disclosed here.

<sup>9</sup> Product churn refers to the frequency at which products are replaced by similar products. The clothing sector typically features a high product churn as, each season, certain products are replaced by new products that are very similar to the incumbent products (e.g. products of the winter collection are replaced by products of the spring collection). This process is typically preceded by sales. The high rate of product churn in the clothing sector leads to an ever-decreasing price trend, which poses problems in analysis. We are currently working to develop methods to overcome these problems.

<sup>10</sup> Specifically, daily price changes are calculated at the individual product level and aggregated (without weighting) for the respective COICOP 5-digit groups to finally calculate a continuous index per 5-digit group. This index is normalized to 1 on the first day of observation. Further aggregation to the COICOP 3-digit level is then performed using HICP weights. To make price trends easier to read, our charts show five-day moving averages of the price indices.

inflation statistics and webscraping online price data. We will discuss this point in more detail in section 2.4.

Finally, since we only just began webscraping online price data, many products and, especially, many services have not been included in our webscraping product basket yet. Many of the still missing product categories are, however, very important when it comes to headline inflation (e.g. services, energy). Hence, at least at this stage of our project, analyzed price developments are not necessarily representative for the whole basket of goods and services that households consume. For this reason, we refrain from calculating an overall rate of inflation from the results of our analysis.

## 2 Results

In the following subsections, we will first discuss developments in prices for food, beverages and meal delivery services and then developments in prices for medical products, personal care products and IT equipment. Moreover, we compare price developments according to our data with price developments according to the HICP as published by Statistics Austria, discussing potential reasons for differences in the results.

### 2.1 Food price development during the COVID-19 crisis

Based on anecdotal evidence, the Austrian media occasionally reported that some food and services prices went up during the weeks the first containment measures were in place in spring 2020.<sup>11</sup> Based on our data, we are able to investigate price developments since the beginning of April 2020 for at least part of the Austrian basket of goods and services.

Chart 1 shows the development of the price indices for food and beverages. For these product categories, we find only minor price changes over the observation period. According to our data, food prices dropped slightly in the first half of April 2020 (by approximately 0.36%). During the second half of April and in May 2020, prices returned to their initial levels, before decreasing again in August. At the end of the observation period, i.e. August 31, 2020, overall food prices were approximately 0.25% lower than on April 1, 2020. To hide the high frequency movements of food prices, we also calculated monthly averages of the price indices. According to these monthly averages, food prices in Austria increased slightly from April to July 2020, before decreasing again in August and eventually returning to the level observed in April.

With regard to beverages, we see different developments in prices for alcoholic and nonalcoholic beverages. While prices for nonalcoholic beverages steadily decreased over the observation period, closing at levels that were 0.86% lower at the end of August than at the beginning of April 2020, prices for alcoholic beverages developed more ambiguously: During April and May 2020, they went up. Around June 1, 2020, however, they suddenly fell. As explained in the box below, this sudden change can (partially) be explained by the (anticipation of) the de facto abolition of the sparkling wine tax. Later, prices for alcoholic beverages followed

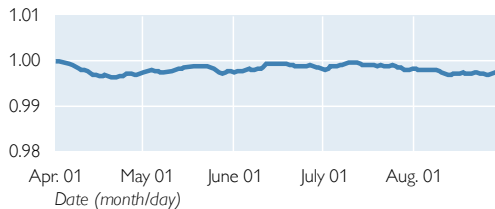
<sup>11</sup> See e.g. *Kronen Zeitung*. 2020. *Auf Todeswelle folgt Preislawine*. May 6. <https://www.pressreader.com/austria/kronen-zeitung-9qf1/20200506/281487868517835>. The article reports price increases in Italy, in particular. The Italian consumer protection association Codacons observes strong price increases for agricultural products and transport services at the beginning of stage 2 of the containment measures in Italy, see [https://www.kleinezeitung.at/international/corona/5809359/Lebensmittel-und-Reisen\\_Phase-2-in-Italien-brachte-saftige](https://www.kleinezeitung.at/international/corona/5809359/Lebensmittel-und-Reisen_Phase-2-in-Italien-brachte-saftige).

Chart 1

## Price indices

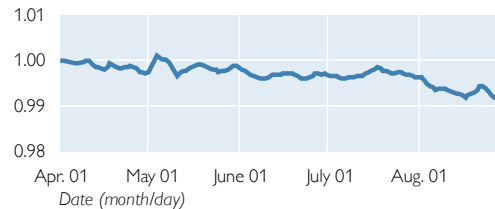
### Food

Index (five-day moving average): 1 = April 1, 2020



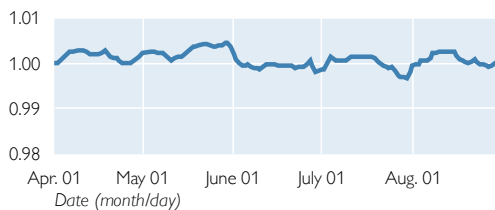
### Nonalcoholic beverages

Index (five-day moving average): 1 = April 1, 2020



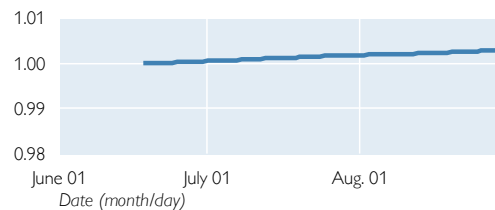
### Alcoholic beverages

Index (five-day moving average): 1 = April 1, 2020



### Food delivery services

Index (five-day moving average): 1 = June 18, 2020



Source: OeNB.

an overall positive trend although two dips occurred at the end of June and July, respectively. Concerning monthly averages, we find that average prices for alcoholic beverages rose in April and May 2020. On average, they were 0.14% higher in May than in April. In June 2020, they were about 0.2% lower than in April; they increased again later and, at the end of the observation period, returned almost to the average levels observed in April.

Turning to online meal delivery services, we must note that such services, although increasingly popular, are not part of the COICOP as they are basically a combination of two different services: the preparation of the meal and its delivery. As these services are provided by two different companies, the price considered here is a composite price of two businesses. For online meal delivery services, we observe a monotonous and fairly smooth rise in prices from the beginning of the observation period (June 18, 2020) to end-August 2020. However, at roughly 0.3%, the change observed in meal delivery prices over the entire observation period was relatively small.

Box 1

### Pass-through of tax cuts to online consumer prices<sup>12</sup>

*In response to the COVID-19 crisis, the Austrian federal government introduced several tax changes. We can use our data to analyze the impact on consumer prices of two of these measures: the reduction, or de facto abolition, of the sparkling wine tax and the VAT change in the HORECA<sup>13</sup> sector.*

*On May 11, 2020, the Austrian government announced that the tax rate on sparkling wine would be set to zero from EUR 100 per hectoliter, starting on July 1, 2020. Before that date, the sparkling wine tax had been levied on sparkling wine, champagne and certain brands of Prosecco spumante if they were sold in bottles with sparkling wine stoppers fixed by a special holding device. Frizzante and slightly sparkling wines were not subject to this definition of sparkling wines.*

For a standard bottle of sparkling wine (0.75l), the cut in the sparkling wine tax reduced the tax burden by EUR 0.9 per bottle (EUR 0.75 sparkling wine tax plus EUR 0.15 VAT) or EUR 1.2 per liter. Austria's revenue from the sparkling wine tax amounted to around EUR 24 million in 2019.

The supermarkets included in our dataset offer about 95 products that were subject to the sparkling wine tax. By comparing absolute prices observed in a period before the announcement of the tax cut (e.g. from April 16 to May 8, 2020) with those observed in the period beginning two weeks after its implementation (July 16 to July 26, 2020), we see that the median price of sparkling wines fell by EUR 1 per bottle. This price drop may be explained by the fact that supermarkets often set round prices or attractive prices (e.g. prices ending in 99 cents), which can only be preserved if prices per bottle are cut by exactly EUR 1. We find that the average price for a bottle of sparkling wine dropped by around EUR 0.67 (see table B1). As about 16% of the sparkling wines in our dataset do not show any price changes, the average price reduction is below the median price reduction. The median of the pass-through of the sparkling wine tax cut, i.e. of the proportion of the tax cut that is passed on to consumers as a price cut, amounted to 111% of the tax cut; the average amounted to 82%. One of the reasons for the disproportionate pass-through was probably the sharp drop in demand for sparkling wines as a result of the COVID-19 pandemic in combination with the relatively short shelf life of sparkling wine. According to our data, sparkling wines did not show significant price increases in August 2020. Hence, so far, the abolition of the sparkling wine tax seems to have had a lasting effect. In contrast, however, the prices of wines not affected by the sparkling wine tax were raised slightly at around the time the prices for sparkling wine were reduced. Since the HICP weight of sparkling wine is only 0.14%, the reduction of prices for sparkling wines is not expected to have any noticeable effect on the aggregate inflation rate.

In the HORECA sector, the VAT rate was reduced to 5% from the former rates of 10% for food and accommodation and 20% for beverages as of June 1, 2020. This tax cut was initially intended to be effective until December 31, 2020, but meanwhile, the government has announced that it will be extended to end-2021. Apart from applying to meals served in restaurants, the VAT reduction also applies to the pick-up and delivery of meals and open drinks that are normally consumed on site. It does not apply to meals bought in supermarkets or to packaged meals and drinks. The Austrian federal government explicitly announced that this VAT reduction was intended as a measure to support the HORECA sector, in particular to help businesses achieve greater liquidity. Therefore, it was not expected that this tax cut would be passed on to consumers by way of price reductions. Moreover, the Austrian Nationalrat (national council) adopted a resolution requesting that the subsequent VAT increase, which will most likely be implemented in January 2022, should not lead to higher prices.

Regarding meal delivery services, chart 1 (in the main text) suggests that the VAT reduction did not result in price drops, neither around the date when it came into force nor in the weeks that followed. On the contrary (as discussed in the main text), meal delivery prices even increased. Thus, the VAT reduction was not passed on to consumers but used by the companies – as the government had intended – to build up liquidity and shore up profits.

Table B1

### Price change and pass-through of cut in tax on sparkling wine and champagne

	Median	Mean
Absolute price change (EUR)	-1.0	-0.7
Relative price change (%)	-8.3	-8.2
Pass-through (%)	111.1	82.3

Source: OeNB.

Note: Comparison periods: April 16 to May 8, 2020 and July 16 to July 26, 2020.

## 2.2 Development of prices for personal care products, medical products and IT equipment

The price indices for personal care products, medical products and IT equipment are presented in chart 2. As mentioned earlier, additional online shops entered the sample during the observation period, causing significant changes in the number of products in certain categories. Hence, the entry dates of these additional shops were treated as data breaks. The data breaks are indicated by black vertical lines in chart 2.

For personal care products, we find a rather steep price increase in the second half of May 2020 (+0.9%), which was followed by a price decline in June. Overall, from the beginning of the observation period until mid-June 2020, prices for personal care products went up by about 0.6%. After the data break in mid-June, they fell again – by a total of 1.3% until the end of the observation period. Compared to the other product categories analyzed, this decrease was the largest price change in the entire sample.

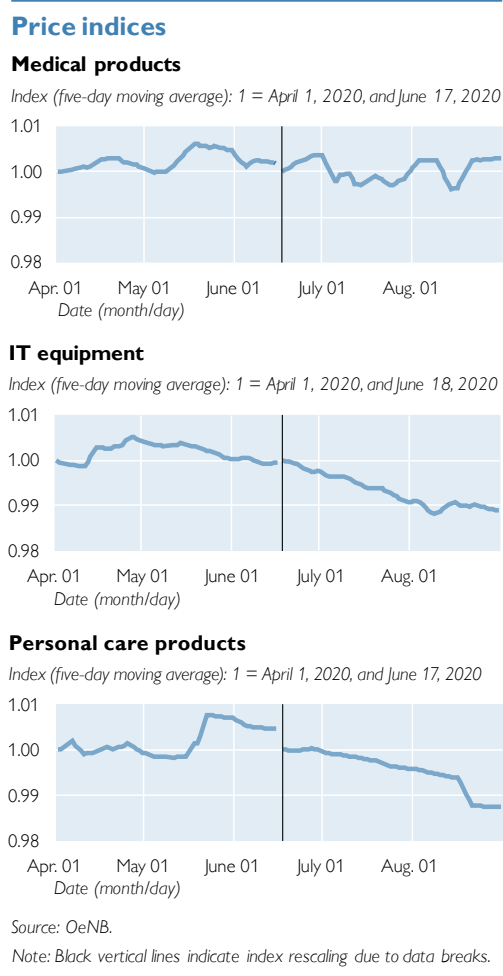
Regarding medical products, we find a clear upward movement in prices around mid-May 2020, followed by a price decline that lasted until mid-June. Prices for medical products were found to be 0.2% higher in mid-June than at the beginning of the observation period. After the data break, when prices from an online pharmacy entered the dataset, medical product prices decreased in July 2020 before increasing again in August. Overall, at end-August 2020, prices for medical products were 0.26% higher than at the time of the data break in mid-June.

Finally, for IT equipment, we find that after an initial price increase during April 2020 (by about 0.5%), prices fell steadily until end-August. More specifically, prices dropped by about 1.2% from mid-June (right after the data break) until the end of the observation period at end-August 2020.

## 2.3 Comparison of webscraped data and HICP data

Table 1 compares price changes in the respective COICOP categories according to our webscraped data with price changes according to HICP data as published by Statistics Austria. To increase the comparability of the two data sources, we calculated the rate of change from the first to the last month of the observation period for our webscraped data, using only data from the 6<sup>th</sup> to the 12<sup>th</sup> day of these

Chart 2



months as this corresponds to the period in which Statistics Austria conducts its monthly price data collection.<sup>14</sup> As table 1 shows, price developments according to the two data sources are quite similar for the product categories of food and personal care products, while there are considerable differences for most other product categories. Most likely, these differences stem from methodological differences in data collection.

Webscraped price data differ conceptually from HICP data. The HICP contains price data for specifically selected products. These products are chosen according to the expenses of a representative household as determined every five years by the household budget survey. This means that the HICP only considers goods that are important to a representative household. Price data for the HICP are collected every month and a special focus is put on the continuity of data for each specific product. This approach also involves the special treatment of changes in the products that are offered. For example, when a store decides to stop selling a product, a comparable product has to be found to replace the incumbent product in data collection. Thus, HICP data are quite specific in the sense that they contain narrowly defined products.

Compared to HICP data, our webscraped price data are much more broadly defined since we collected data for all products that are being offered. Furthermore, we collected price data for different variants of each product. For instance, we did not focus on a specific type of flour that we define as being representative for all types of flour consumers buy. Instead, we collected data on any type of flour offered by the stores in our sample.

To sum up, the two data sources offer two different perspectives on inflation as they cover rather different parts of the price universe. Consequently, our results differ from HICP inflation statistics. More specifically, the differences depend on the similarity of the underlying products covered by the two data sources. As table 1 shows, the inflation rates calculated from both data sources are quite similar for

Table 1

### Comparison of price changes based on webscraping and HICP data

	Webscraping <sup>1,2</sup>	HICP <sup>1</sup>
Food	-0.1	-0.2
Nonalcoholic beverages	-0.6	0.3
Alcoholic beverages	-0.0	-1.7
Medical products (observation period: April to June 2020)	0.2	-0.5
Medical products (observation period: July to August 2020)	0.3	-0.0
Personal care products (observation period: April to June 2020)	0.5	0.2
Personal care products (observation period: July to August 2020)	-0.4	-0.4
IT equipment (observation period: April to June 2020)	0.1	-1.4
IT equipment (observation period: July to August 2020)	-0.8	-0.0

Source: Statistics Austria, OeNB.

<sup>1</sup> Change in monthly index over the entire observation period in %.

<sup>2</sup> The monthly index was calculated using the mean of the daily index from the 6<sup>th</sup> to the 12<sup>th</sup> day of the corresponding month.

<sup>14</sup> For medical products, personal care products and IT equipment, we performed this calculation separately for the period before the data break and for the period after the data break (April 6 to April 12, 2020 vs. June 6 to June 12, 2020; and July 6 to July 12, 2020 vs. August 6 to August 12, 2020).



food, where webscraped price data and HICP price data are based on very similar product baskets. By contrast, the calculated inflation rates are rather different for medical products since for these, the respective product baskets differ substantially. Our webscraped data, for instance, do not contain prescription medication. Furthermore, for personal care products, medical products and IT equipment, we see that figures match better in the periods after the data break than in the periods before the data break. This potentially follows from the fact that the representativeness of the webscraped data increased as product variety augmented when we included additional stores in our sample.

While webscraped price data might be used in the future for nowcasting HICP inflation (see e.g. Macias and Stelmasiak, 2019), using different measures for inflation may be reasonable as well, especially in case of disruptive economic events. In case of the COVID-19 pandemic, for example, webscraped data offer timely and highly disaggregate information on price developments.

### 3 Conclusions

The COVID-19 pandemic and the accompanying policy measures have affected both the demand and supply side of the Austrian economy, and consequently also consumer prices, in multiple ways. The overall impact of the COVID-19-related economic shocks on the direction and magnitude of price changes is, a priori, not clear. To gain insights into price developments during the COVID-19 pandemic, the OeNB has collected price data from a number of online shops via webscraping since the beginning of April 2020.

Based on these webscraped data, we analyzed developments in the prices for certain product categories that became especially relevant during the COVID-19 crisis. For most products, the period of analysis stretched from April to August 2020. This relatively short observation period, however, does not allow for the calculation of year-on-year inflation rates and makes it difficult to interpret seasonal price patterns.

In brief, we observed the following price developments: Prices for food and alcoholic beverages changed only slightly over the observation period. Nonalcoholic beverages were about 0.9% cheaper at the end of August than at the beginning of April 2020. For meals delivered by the meal delivery service provider in our sample, we observe a steady – albeit small – price increase. Eventually, the prices of delivered meals ended up 0.3% above those observed at the beginning of the observation period. Regarding the fiscal measures intended to cushion the effects of the COVID-19 crisis, our data show that the abolition of the sparkling wine tax was passed on to consumer prices, whereas the VAT reduction for meals and drinks offered by restaurants and catering services did not result in price decreases for delivered meals.

Personal care products saw the largest price changes of all products in our sample. Prices went up by about 0.5% between April and mid-June 2020, before dropping again by about 1.3% until the end of the observation period. Prices for medical products increased slightly and for IT equipment we observe an overall small drop in prices.

When we compare our results with HICP data for the same COICOP categories, we find similar developments for food and personal care products, but considerable differences for the remaining categories, which might be attributable to

conceptual differences in product and store coverage. Webscraped data have both advantages and disadvantages when compared to the data underlying the CPI and HICP: On the one hand, webscraping collects price data for all products offered by the respective online shops, while only prices of precisely specified products are collected for the CPI and HICP. On the other hand, webscraped price data are only downloaded from a limited number of online shops, whereas for the CPI and HICP price data are collected from a broader variety of shops and types of businesses. Bearing this in mind, we find that inflation measures based on webscraped price data provide important information complimentary to HICP-based measures.

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## Annex

Table A1

### Sample description

Online shop	Sampling period		Goods covered in the following COICOP categories <sup>2</sup>
	Start	End	
Supermarket 1	April 1, 2020	August 31, 2020	Food, nonalcoholic beverages, alcoholic beverages, medical products, personal care products
Supermarket 2	April 1, 2020	August 31, 2020	Food, nonalcoholic beverages, alcoholic beverages, medical products, personal care products
Drugstore	April 11, 2020	August 31, 2020	Food, nonalcoholic beverages, medical products, IT equipment, personal care products
Electronics store 1	April 1, 2020	August 31, 2020	Nonalcoholic beverages, medical products, IT equipment, personal care products <sup>3</sup>
Electronics store 2	June 18, 2020	August 31, 2020	Medical products, IT equipment, personal care products <sup>3</sup>
Electronics store 3	August 10, 2020	August 31, 2020	Nonalcoholic beverages, medical products, IT equipment, personal care products <sup>3</sup>
Pharmacy <sup>1</sup>	June 17, 2020	August 31, 2020	Food, nonalcoholic beverages, medical products, personal care products
Meal delivery service provider	June 18, 2020	August 31, 2020	Not applicable
Clothing store 1	June 17, 2020	August 31, 2020	Personal care products <sup>3</sup>
Clothing store 2	April 10, 2020	August 31, 2020	Personal care products <sup>3</sup>

Source: OeNB.

<sup>1</sup> From August 25, 2020, pharmacy data have been collected on a weekly basis only.

<sup>2</sup> The COICOP 5 categories represented in our analysis (including catering services categories represented by the meal delivery service provider) cover about 30% of the total Austrian HICP basket.

<sup>3</sup> Personal care products in clothing stores primarily comprise cosmetic and perfumery products; in electronics stores, personal care products comprise appliances (e.g. hair dryers). Medical products in electronics stores mainly comprise medical appliances (e.g. blood pressure gauges).