

Research Department



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Current Policy Perspectives

The Drivers of Inflation Dynamics during the Pandemic: (Early) Evidence from Disaggregated Consumption Data

Viacheslav Sheremirov

What explains inflation dynamics during the COVID-19 pandemic? This brief focuses on the relative roles of demand and supply factors. Prices and quantities of consumed goods and services are positively correlated following demand changes and negatively correlated in response to supply disturbances. Employing disaggregated indexes from personal consumption expenditures data, this brief documents a positive relationship between prices and quantities during the early stages of the pandemic, followed by a negative relationship in the later period. Thus, while the short deflation episode in March and April 2020 and the following offsetting inflation could be explained by the large fluctuation in demand triggered by the lockdown, the recently elevated inflation readings are likely due to insufficient supply, as global supply chains continue to experience pandemic-related disruptions and many employees are reluctant to return to in-person work until the threat of COVID-19 subsides. The disproportionate influence on April 2021 inflation of consumption categories such as accommodations, public transportation, and used motor vehicles also points to the likely transitory nature of recent inflation. While emphasizing supply factors, this study focuses on a relatively short period, exploiting disaggregated monthly indexes, which are typically volatile. As the recovery still depends on the course of the pandemic, globally as well as domestically, observing inflation over a longer period should deliver a more nuanced picture of inflation dynamics during this episode.

Viacheslav Sheremirov is a senior economist in the Research Department at the Federal Reserve Bank of Boston. His email address is Viacheslav.Sheremirov@bos.frb.org.

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Overview

The COVID-19 pandemic has affected the economic environment tremendously. Even inflation, which had been persistently low for a long time, fluctuated noticeably during this period. In spring 2020, at the onset of the recession, prices temporarily declined. And as the recovery accelerated in spring 2021, inflation rose above the rates observed before the pandemic. Were these unusual fluctuations driven mostly by demand or by supply? Were the sources of inflation aggregate or sectoral, persistent or transitory? If inflation rises because of a persistent increase in aggregate demand, stabilization policies can achieve their goals without jeopardizing the ongoing recovery. But if inflation is due to insufficient aggregate supply, caused, for example, by persistent disruptions in global supply chains or structural changes in the labor market, stabilization policies could face a potentially costly tradeoff between conflicting objectives. If, instead, inflation is caused by idiosyncratic, transitory factors, it may resolve itself relatively quickly as domestic public health and economic conditions return to normal.

This brief presents early evidence on the sources of inflation during the pandemic, focusing on disaggregated prices and consumption. If price dynamics are driven mostly by demand factors, changes in prices and quantities of consumed goods and services should correlate positively. If supply shocks dominate, this correlation should be negative. Using a panel of consumption categories over the pandemic period, this study finds a positive correlation at the early stages of the recession and a negative correlation during the recent period of rising inflation. Thus, the brief deflation episode observed in March and April 2020 and the subsequent pickup in inflation over the summer were driven mostly by aggregate demand fluctuations, whereas rising inflation in March and April 2021 is consistent with insufficient supply.

The negative relationship between disaggregated prices and consumption is stronger in the empirical specifications that control for aggregate effects than in the specifications that do not, thereby pointing to idiosyncratic shocks and the likely transitory nature of recent inflation. Moreover, a small number of influential categories disproportionately affected aggregate inflation. Out of 51 categories, just five, with a combined consumption share of 6.8%, were responsible for half of the headline inflation in April 2021. Changes in consumption and prices for accommodations, public transportation, recreational services, and used motor vehicles were particularly different from those for the typical category.

Next, I investigate whether sectoral inflation is as persistent as aggregate inflation. Using data for a longer sample starting in 1990, I find that inflation for the average consumption category is two to three times less persistent than aggregate inflation. Hence, a supply shock disturbing the average sector should dissipate faster than a similar aggregate shock. Furthermore, inflation for accommodations, public transportation, and recreational services does not exhibit significant positive

persistence. The corresponding autoregressive processes have a negative dominant root, suggesting that inflation in these categories follows a cyclical pattern. Inflation for used motor vehicles, however, is more persistent than inflation for the average category and is nearly as persistent as aggregate inflation. Yet, based on back-of-the-envelope calculations, idiosyncratic shocks of the magnitude observed in that category recently are unlikely to have a lasting effect on aggregate inflation, unless the current shock turns out to be significantly more persistent than previous shocks in this sector.

Finally, I examine the cross-sectional variability of disaggregated inflation rates, which in theory comoves with the magnitude of trend inflation. Whereas the inflation gap between the categories in the 90th and 10th percentiles of the price-change distribution widened substantially, the interquartile range increased only mildly. Overall, the dispersion of price changes increased less in 2021 than during the 2020 deflation, which proved temporary. The indirect evidence inferred from the behavior of price dispersion, therefore, also points to transitory factors stemming from a few influential categories.

Despite preliminary evidence indicating that inflation observed in March and April 2021 was mostly due to temporary factors, the episode of unprecedented economic dynamics heavily affected by the pandemic is still evolving, and much of the evidence comes from just two months of rising inflation. Thus, even if the inflation observed in the past was transitory, inflationary pressures may still persist if rising demand outpaces aggregate supply for a long period.

This brief proceeds as follows. Section 1 discusses aggregate inflation dynamics during the pandemic. Section 2 analyzes the comovement of disaggregated inflation and consumption growth. Section 3 compares aggregate inflation persistence with idiosyncratic persistence, focusing on the categories that disproportionately affected aggregate inflation in April 2021. Section 4 shows the evolution of price-change dispersion over the pandemic period. Section 5 concludes.

1. Inflation during the Pandemic

While inflation was low—or even negative—during the early stages of the pandemic, it increased noticeably as the recovery accelerated. Figure 1 shows year-over-year changes in the core personal consumption expenditures (PCE) price index (blue solid line) and in the core consumer price index (CPI; red dashed line). According to these measures, inflation remained below target for all of 2020 but started increasing rapidly in March 2021. In April, both measures were close to 3%; in May, core CPI inflation increased further to 3.8%.¹ While some of this increase is due to the base effect (that is, a temporary decline in the price level at the onset of the pandemic), monthly price

¹May PCE inflation had not been released as of the time of writing. Note also that because CPI inflation is consistently higher than PCE inflation, the target defined as a 2% increase in the PCE price index would correspond to a CPI increase of slightly more than 2%.

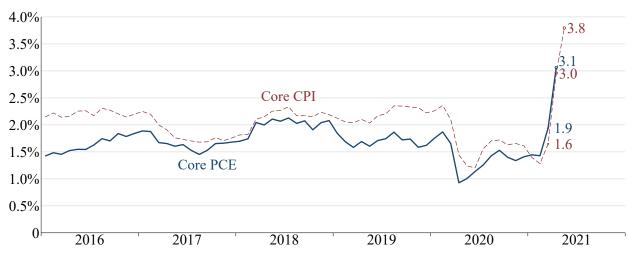


Figure 1: Changes in Aggregate Price Indexes over the Preceding 12 Months

Sources: All tables and figures are based on the author's calculations using data covering the period through April 2021 (May 2021 vintage) for the personal consumption expenditures (PCE) price and quantity indexes, available from the Bureau of Economic Analysis. Supplementary data for the consumer price index (CPI), from the Bureau of Labor Statistics, cover the period ending May 2021.

Notes: The red labels show core CPI inflation in March through May 2021, while the blue labels show the core PCE inflation in March and April 2021. The May PCE data were not available at the time of writing.

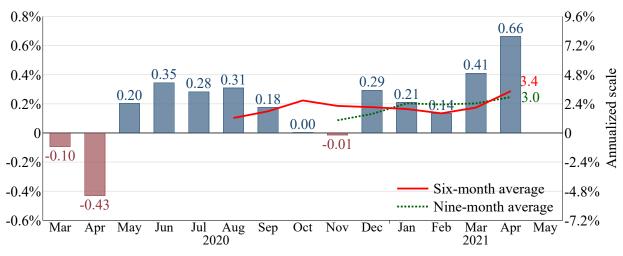
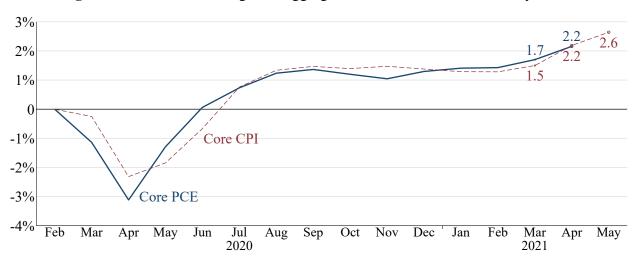
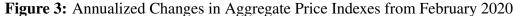


Figure 2: Changes in the Core PCE Price Index from the Preceding Month

Notes: The bar labels show month-to-month changes in the core PCE price index. The right axis shows these changes on an annualized scale. The labels next to the red solid and green dotted lines show the annualized inflation rates over the preceding six-month and nine-month periods, respectively.





increases were elevated during four out of the last five months with available PCE data (vertical bars in Figure 2). The monthly rates of core inflation were particularly high in March and April 2021, at 0.41% and 0.66%, respectively.

To remove the effect of the temporary decline in the price level a year ago, we can focus on a shorter period. Over the nine-month period from August 2020 through April 2021, core prices grew at a 3.0% annual rate (green dotted line in Figure 2). And over the six-month period starting in November 2020, core prices increased even faster, at a 3.4% annual rate (red solid line). Neither period includes the price drops in March and April 2020 and the subsequent price increase in May through July 2020.

To be consistent with the 2% inflation target, however, it is not enough that prices return to their prepandemic level. By June 2020, core PCE prices were back at their February 2020 level. Yet, they were still about 0.5% below the counterfactual target level because, during this period, prices would likely have grown—rather than remained the same—had the pandemic not occurred. Therefore, some compensatory inflation in excess of 2% over a short period could still be consistent with the target over a longer period. Comparing core prices with their February 2020 level, Figure 3 shows that the high inflationary trend during the preceding nine-month period ensured that the 2% annualized price growth was reached—and slightly exceeded—in April 2021. The subsequent increase in the core CPI in May, however, brought inflation to a 2.6% annual rate relative to February 2020.

2. Comovement of Disaggregated Price and Quantity Indexes

To evaluate the sources of inflation, I employ PCE data on prices, real consumption, and consumption shares for 51 disaggregated categories.² While these data are also available at a more disaggregated level, the coarser category grouping simplifies interpretation. Weighting observations by their corresponding shares ensures that the results are representative of aggregate inflation dynamics.

I compute disaggregated inflation rates $(\pi_{i,t})$ in consumption category *i* and month *t* as $\pi_{i,t} = P_{i,t}/P_{i,t-1} - 1$, and monthly changes in consumption as $C_{i,t} = \text{RPCE}_{i,t}/\text{RPCE}_{i,t-1} - 1$, where $P_{i,t}$ and RPCE_{*i*,*t*} are the disaggregated PCE price index and real personal consumption expenditure, respectively. Using April 2021 data, Figure 4a shows a scatterplot of these two variables, together with the linear fit with equal weights (black solid line) and consumption weights (red dashed line). The plot features four categories with particularly high inflation rates (public transportation, used motor vehicles, accommodations, nonprofits' consumption expenditures) and one category with a large consumption growth rate (recreational services). Making up 6.8% of personal consumption expenditures, these five categories were responsible for half of the headline inflation in April 2021.

The relationship between inflation and consumption growth is negative, particularly so when weighted by consumption shares. Most influential categories are not particularly large, as only nonprofits' consumption is larger than the average category in the sample. These influential categories, however, provide mixed evidence on the sources of inflation. High consumption growth for recreational services points to demand shocks, whereas the decline in used motor vehicles and nonprofits' consumption is in line with supply shocks. Public transportation and accommodations have recently experienced substantial growth relative to other categories, but they remain weak relative to their prepandemic employment.³

Figure 4b zooms in on a cluster of consumption categories with growth rates of prices and quantities closer to those observed before the pandemic. The relationship in this subsample is also negative, and the difference between the consumption-weighted and equally weighted slopes diminishes. Overall, this analysis provides little evidence that sectoral demand shocks were the dominant source of inflation in April 2021, as the sectors that improved relatively more experienced, on average, relatively less inflation. Figure A.1 in the appendix shows that a similar pattern holds in December 2020 through March 2021. The relationship between prices and quantities is typically negative during this period and is often dominated by a small number of influential

²The full list of categories, including their April 2021 inflation, real consumption growth, and consumption shares, can be found in Appendix Table A.1.

³For a subset of consumption categories that can be matched with disaggregated employment data from the Bureau of Labor Statistics' Establishment Survey, I also find a negative correlation between disaggregated inflation and cumulative employment losses since February 2020. In this exercise, accommodations and recreational services stand out as influential, with relatively high inflation and particularly large cumulative employment losses.

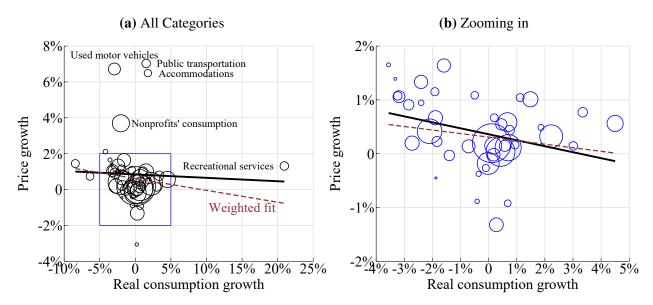


Figure 4: Comovement of the April-to-March Growth Rates of Prices and Consumption

Notes: The figure scatters the April-to-March changes in the disaggregated PCE price indexes on the vertical axis over the corresponding changes in real consumption. The circle sizes correspond to the PCE shares. The black solid line shows the linear fit with equal weights, and the red dashed line shows the fit with PCE shares as weights. Panel (a) shows all disaggregated categories, while Panel (b) zooms in on the observations with price changes between -2% and 2%, and real consumption growth between -5% and 5% (blue square in the left panel).

		Equally Weighted			С	Consumption Weighted			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
	(a) March 2020 through April 2021								
Slope	0.017**	0.018**	0.001	0.002	0.025**	0.026**	0.016^{*}	0.017^{*}	
	(0.007)	(0.008)	(0.008)	(0.009)	(0.011)	(0.011)	(0.009)	(0.009)	
Observations	714	714	714	714	714	714	714	714	
	(b) November 2020 through April 2021								
Slope	-0.012	-0.001	-0.039^{*}	-0.022	-0.001	0.003	-0.018	-0.014	
	(0.016)	(0.016)	(0.023)	(0.022)	(0.017)	(0.016)	(0.018)	(0.018)	
Observations	306	306	306	306	306	306	306	306	
Category effects	No	Yes	No	Yes	No	Yes	No	Yes	
Time effects	No	No	Yes	Yes	No	No	Yes	Yes	

Table 1: Comovement of Inflation and Consumption Growth: Panel Estimates

Notes: This table shows estimates of the slope β in specification (1) with various combinations of fixed effects, weighting schemes, and estimation samples. Standard errors consistent in the presence of heteroskedasticity and autocorrelation are in parentheses. ** p < 0.05, * p < 0.1.

categories, such as used motor vehicles, fuels, accommodations, and jewelry.

The analyses above exploit cross-sectional variation and, generally, cannot account for aggregate factors. For instance, an aggregate demand shock affecting most categories in a similar way would result in high inflation and high consumption growth across the board. While the points in the graph above would move northeast in such a case, their positions relative to one another could change little as a result. To account for aggregate factors, I employ panel techniques. I estimate various specifications that are nested in the following econometric model:

$$\pi_{i,t} = \alpha_i + \beta C_{i,t} + \gamma_t + \varepsilon_{i,t}, \qquad (1)$$

where, as before, $\pi_{i,t}$ is the monthly inflation rate in category *i* and month *t*, $C_{i,t}$ is the monthly growth rate of real consumption, and $\varepsilon_{i,t}$ is the error term. Parameters α_i capture sectoral effects, and γ_t partial-out aggregate effects in order to focus on sectoral shocks, as in the figure above. When γ_t is not included in specification (1), the variation in consumption and inflation can be driven jointly by aggregate shocks. The coefficient β measures the comovement of prices and quantities. If $\beta > 0$, demand shocks dominate, whereas $\beta < 0$ indicates the prevalence of supply shocks.

Panel (a) of Table 1 shows estimates of β in the sample covering March 2020 through April 2021. In columns (1) through (4), all observations are assigned equal weights. The first two columns, which do not control for time effects and hence allow for aggregate shocks to drive the dynamics, suggest that inflation during the pandemic period overall was affected by demand shocks more than by supply shocks. When the time effects are included (columns 3 through 4), the relationship disappears, suggesting that sectoral demand and supply shocks either played a relatively small role or offset each other. Columns (5) through (8) show β estimates when observations are weighted by consumption shares. The results are similar overall to those in the first four columns, with a somewhat larger role played by idiosyncratic demand shocks.

Panel (b) of Table 1 shows estimates of the same regressions for the sample covering November 2020 through April 2021, a period characterized by relatively high inflation. In all but one specifications, the slope is negative but, typically, not statistically significant. Thus, these results do not lend support to aggregate demand shocks as a dominant source of inflation and even point weakly to idiosyncratic supply shocks.

3. Disaggregated Inflation Persistence

Aggregate inflation is persistent (Fuhrer, 2010), implying that a large shock may have a lasting effect on inflation even if the shock resolves itself relatively quickly. In addition to intrinsic persistence, aggregate inflation may inherit persistence from an idiosyncratic shock. Since a small

	1 month	3 months	12 months
	(1)	(2)	(3)
All disaggregated categories:			
Pooled	0.202***	0.193***	0.355***
	(0.048)	(0.064)	(0.080)
Within	0.175***	0.126*	0.144
	(0.050)	(0.069)	(0.099)
Aggregate PCE inflation:			
Headline	0.416***	0.388***	0.418***
	(0.081)	(0.094)	(0.138)
Core	0.188	0.363***	0.679***
	(0.127)	(0.123)	(0.108)

 Table 2: Aggregate and Disaggregated Inflation Persistence

Notes: The first two rows show estimates of the sum of autoregressive coefficients, $\sum_{j} \rho_{j}$, in specification (2), without and with category effects, for the sample January 1990 through April 2021 at the monthly frequency. Standard errors consistent in the presence of intraperiod correlations are in parentheses. The last two rows show SARC estimates for aggregate inflation measures, using the corresponding univariate autoregressive specifications. *** p < 0.01, * p < 0.1

1 month3 months12 monthsAccommodations (1) (2) (3) -0.002 -0.291^{**} -0.059 (0.117) (0.137) (0.292) Public transportation -0.111 -0.415^{***} $-0.098)$ (0.138) (0.264) Recreational services 0.067 -0.330^{**} $0.124)$ (0.130) (0.248) Used motor vehicles 0.278 0.372^{**} $0.178)$ (0.146) (0.160)			1	0
Accommodations -0.002 (0.117) -0.291^{**} (0.292) Public transportation -0.111 (0.098) -0.415^{***} (0.138) -0.561^{**} (0.264) Recreational services 0.067 (0.124) -0.330^{**} (0.130) -0.116 (0.248) Used motor vehicles 0.278 0.372^{**} 0.517^{***}		1 month	3 months	12 months
$\begin{array}{cccc} (0.117) & (0.137) & (0.292) \\ \mbox{Public transportation} & -0.111 & -0.415^{***} & -0.561^{**} \\ (0.098) & (0.138) & (0.264) \\ \mbox{Recreational services} & 0.067 & -0.330^{**} & -0.116 \\ (0.124) & (0.130) & (0.248) \\ \mbox{Used motor vehicles} & 0.278 & 0.372^{**} & 0.517^{***} \end{array}$		(1)	(2)	(3)
Public transportation -0.111 -0.415^{***} -0.561^{**} Recreational services 0.067 -0.330^{**} -0.116 (0.124) (0.130) (0.248) Used motor vehicles 0.278 0.372^{**} 0.517^{***}	Accommodations	-0.002	-0.291^{**}	-0.059
Image: constraint of the constr		(0.117)	(0.137)	(0.292)
Recreational services 0.067 -0.330^{**} -0.116 (0.124) (0.130) (0.248) Used motor vehicles 0.278 0.372^{**} 0.517^{***}	Public transportation	-0.111	-0.415^{***}	-0.561^{**}
(0.124)(0.130)(0.248)Used motor vehicles0.2780.372**0.517***		(0.098)	(0.138)	(0.264)
Used motor vehicles 0.278 0.372** 0.517***	Recreational services	0.067	-0.330**	-0.116
		(0.124)	(0.130)	(0.248)
(0.179) (0.146) (0.160)	Used motor vehicles	0.278	0.372**	0.517***
$\frac{(0.178) (0.140) (0.100)}{(0.160)}$		(0.178)	(0.146)	(0.160)

Table 3: Inflation Persistence for Selected Consumption Categories

Notes: This table shows estimates of the sum of autoregressive coefficients, $\sum_{j} \rho_{j}$, from the corresponding univariate autoregressive model for the sample January 1990 through April 2021 at the monthly frequency. Robust standard errors are in parentheses. *** p < 0.01, ** p < 0.05

number of categories explain much of the recent inflation increase, I investigate whether disaggregated inflation is persistent, especially in such categories.

To evaluate the persistence of disaggregated inflation, I estimate the following panel autoregression at various horizons:

$$\pi_{i,t} = \alpha_i + \sum_j \rho_j \pi_{i,t-j} + \varepsilon_{i,t}.$$
⁽²⁾

As a measure of persistence, I use the sum of autoregressive coefficients (SARC):

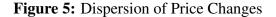
SARC =
$$\sum_{j} \rho_{j}$$
.

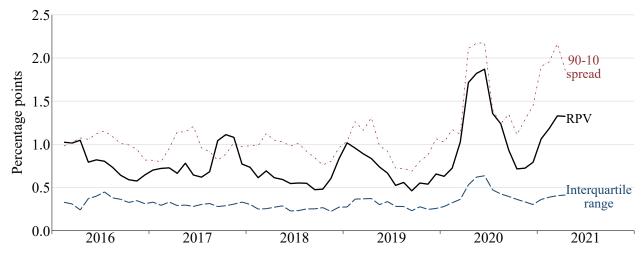
I estimate Equation (2) at one-month, three-month, and twelve-month horizons. For comparison with aggregate inflation persistence, I also estimate a univariate autoregressive process for headline and core PCE inflation. Because autoregressive models require a long time series, I use a sample starting in 1990. One should keep in mind that persistence in response to a unique shock such as the recent pandemic may differ from the average persistence in response to mild shocks.

Table 2 shows estimates for various horizons and specifications. I focus on the results at a quarterly horizon (column 2), which is typically preferred for studying business-cycle fluctuations. Disaggregated inflation is, on average, two to three times less persistent than aggregate inflation. Hence, idiosyncratic shocks dissipate faster than aggregate shocks. Note that core aggregate inflation appears more persistent at longer horizons, whereas sectoral inflation is relatively more persistent at shorter horizons. This result is in line with the transitory nature of idiosyncratic shocks.

Next, I estimate the persistence of disaggregated inflation separately for accommodations, public transportation, recreational services, and used motor vehicles. Not only did these consumption categories experience high inflation recently, but they were directly affected by the lockdown. Table 3 shows that three out of the four categories considered exhibit negative inflation persistence at a quarterly horizon, which may reflect temporary price changes. Only used motor vehicles exhibit large, positive, and statistically significant inflation persistence, which is similar in magnitude to aggregate persistence. Hence, a large idiosyncratic shock affecting used motor vehicles can have a lasting effect on aggregate inflation.

To evaluate a potential contribution of used motor vehicles to aggregate inflation going forward, I make the following back-of-the-envelope calculation. The monthly inflation rate for this category is 6.7% in April, and its consumption weight is 1.5%. This implies that used motor vehicles contributed about 0.1 percentage points to the 0.6% monthly increase in headline PCE prices. With an estimated quarterly persistence of 0.37, it would take about two quarters for the shock of that size to dissipate at the aggregate level. Moreover, its effect could be even shorter lived if the





Notes: This figure plots three measures of price dispersion: relative price variability (RPV), measured by the standard deviation of sectoral inflation rates (black solid line); the spread between inflation rates at the 90th and 10th percentiles (red dotted line); and the interquartile range (blue dashed line). For visibility, the lines are smoothed by the three-month backward moving average.

underlying impulse is monthly or bimonthly rather than quarterly. And while inflation for used motor vehicles was persistent in the past, the current price hike may still prove to be transitory. A hypothetical decline in used motor vehicle prices to their prepandemic level would subtract 0.33 percentage points from aggregate inflation over the corresponding period.

4. Dispersion of Price Changes

Next, I analyze price-dispersion dynamics. Nakamura et al. (2018) and Sheremirov (2020), among others, emphasize the comovement of price dispersion with (the absolute value of) inflation, both in theoretical models and in disaggregated data. Hence, price dispersion may provide another dimension for distinguishing between trend and transitory inflation.⁴ A persistent increase in price dispersion may indicate that the underlying trend inflation is rising. Inflation rising due to idiosyncratic shocks or influential sectors may also lead to a transitory spike in price dispersion. But, in that case, it is likely to be concentrated in the tails of the price-change distribution.

I compute three measures of price dispersion. Relative price variability (RPV), measured by the standard deviation of sectoral inflation rates, is frequently used in the literature focusing on sectoral inflation (Lach and Tsiddon, 1992). This measure captures the overall width of the sectoral price-change distribution. The other two measures are the spread between the 90th and 10th percentiles and the interquartile range. These two measures indicate whether the price-change distribution is

⁴For example, Sheremirov (2020) finds that price dispersion comoves with inflation measures that include temporary price changes less systematically than with measures of *regular* price inflation.

stretching along its middle or tails (or both).

Figure 5 plots the evolution of price dispersion since 2016. All three measures increased sharply in April 2020, at the onset of the pandemic, as the absolute value of inflation increased (relatively large deflation occurred). While by the end of 2020 price dispersion returned to the levels observed before the pandemic, it surged again in early 2021. However, the increase in the 90–10 percentile spread is much larger than the increase in the interquartile range, suggesting that inflation variability is due to a small number of consumption categories.

5. Conclusion

This brief examines early evidence on the drivers of inflation dynamics during the pandemic recession and subsequent recovery. The comovement of disaggregated inflation and consumption growth at the early stages of the pandemic is consistent with aggregate demand shocks being the dominant force, whereas in the recent period sectoral supply shocks appear to play a relatively bigger role. Moreover, sectoral inflation is, on average, less persistent than aggregate inflation. Thus, sectoral shocks tend to affect aggregate inflation for only a short period. Even if the recent inflation dynamics are driven mostly by temporary factors, persistent inflationary pressures may still emerge if the pace of recovery accelerates further while domestic as well as global supply remains constrained. Analyses of an evolving episode of economic dynamics, however, tend to have wide confidence bounds and require further examination as more data become available.

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Appendix: Additional Results

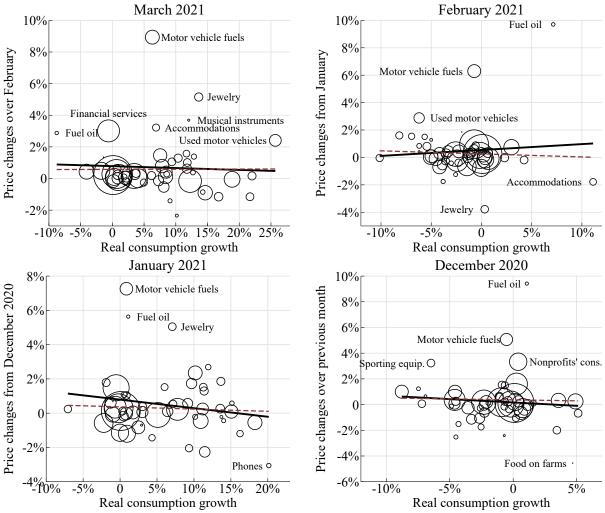


Figure A.1: Comovement of Prices and Quantities: December 2020 through March 2021

Notes: The figure scatters monthly changes in disaggregated price indexes on the vertical axis over the corresponding changes in real consumption. The circle sizes correspond to the PCE shares. The black solid lines show the linear fit for equally weighted observations, and the red dashed lines show the linear fit of observations weighted by consumption shares.

Iable A.1: Data Summary						
	April/March,					
Category	Price	Real PCE	PCE			
	(1)	(2)	(3)			
Public transportation	7.0	1.5	0.8			
Used motor vehicles	6.7	-2.9	1.5			
Accommodations	6.5	1.8	0.6			
Nonprofits' consumption	3.7	-2.0	3.1			
Luggage	2.1	-4.2	0.2			
Recreational books	1.7	-3.6	0.2			
Motor vehicle services	1.6	-1.6	1.9			
Jewelry	1.4	-8.4	0.7			
Educational books	1.4	-3.3	0.1			
Furniture	1.4	-2.4	1.9			
Recreational services	1.3	20.9	0.8			
Printed media	1.2	-1.9	0.7			
Household maintenance	1.1	-0.5	0.6			
Sporting equipment	1.1	-3.2	0.8			
Recreational items	1.1	-3.2	1.5			
Sports vehicles	1.0	1.1	0.7			
Utilities	1.0	1.5	2.4			
Tableware	0.9	-2.4	0.3			
Household supplies	0.9	-2.8	1.1			
Gambling	0.8	3.3	0.9			
Footwear	0.7	-6.4	0.7			
Motor vehicle parts	0.7	0.2	0.7			
Media equipment	0.7	-1.9	2.1			
Pharmaceutical	0.6	0.7	3.8			
New motor vehicles	0.6	4.5	2.8			
Social services	0.5	0.5	1.3			
Other recreational services	0.5	1.9	0.4			
Audio-video services	0.4	0.7	1.0			
Food at home	0.4	-2.1	6.4			
Food services	0.4	2.2	5.6			
Personal care	0.3	-1.8	1.1			
Garments	0.2	-1.8 -2.7	2.1			
Housing	0.2	0.1	16.0			
Tobacco	0.2	0.9	0.7			
Insurance	0.1	0.2	3.1			
Professional and other services	0.1	0.6	1.3			
Personal care services	0.1	3.0	0.8			
Education services	0.1	-0.7	1.8			
Outpatient services	0.1	0.7	7.3			
Hospital services	0.0	0.4	8.9			
Food on farms	0.0	-0.2	0.0			
Communication	0.0	0.2	1.7			
Alcohol at home	0.0	-1.4	1.2			
Financial services	-0.2	0.0	5.1			
Therapeutic appliances	-0.3	-0.1	0.5			
Tools	-0.4	-0.4	0.3			
Musical instruments	-0.5	-1.9	0.1			
Phones	-0.9	-0.4	0.2			
Household appliances	-0.9	0.7	0.5			
Motor vehicle fuels	-1.3	0.3	2.0			
Fuel oil	-3.1	0.2	0.1			
Average (equal weights)	0.8	-0.3	2.0			
Aggregate (PCE weighted)	0.6	- 0 .1	100.2			
Aggregate (1 CE weighted)	0.0	-0.1	100.4			

 Table A.1: Data Summary

Notes: The categories are sorted by the April 2021 inflation rate (column 1) in decreasing order. The sum of shares in column (3) is above 100% due to the omission of two categories, net foreign travel and net expenditures abroad (with a combined PCE share of -0.2%), for which inflation rates are not reported, and due to the rounding error.