

CPI in the time of Covid:  
communication about the quality and  
computation of alternative indices  
The French experience



- Since March 2020, a lot of restrictions in response to the health crisis
  - From the 16th March to the 11th May, a first (strict) lockdown in France
  - From the 11<sup>th</sup> of May to July, a progressive reopening of activities
  - Since then, new restrictions and curfews
  - For two weeks, a new lockdown

- Two consequences for the CPI

- A change in the consumption pattern

- A lot of consumption segments disappeared (at least temporary): restaurant, hotel, tourism, culture...
    - A lot of outlets were closed with a possible transfer to online purchases

The price collection on the field by price collectors was adjourned from the 16<sup>th</sup> March to the 15<sup>th</sup> June ... and since the 30<sup>th</sup> of October

- Very useful guidelines were released by Eurostat and the UNECE/ IMF and were implemented in the French case.

Eurostat : [https://ec.europa.eu/eurostat/documents/10186/10693286/HICP\\_guidance.pdf](https://ec.europa.eu/eurostat/documents/10186/10693286/HICP_guidance.pdf)

UNECE-IMF: <https://statswiki.unece.org/display/CCD2/Compilation+of+CPI+in+times+of+COVID-19>

- Despite the shock on consumption, the French CPI remained a Laspeyres-type index:
  - Weights remained unchanged
  - Imputations were performed when no more transaction prices were observed (for lack of observation or lack of transaction)
- Alternative price collections were implemented:
  - Before the health crisis, only 4/10<sup>th</sup> of the French CPI basket was collected “on the field” (online price collection, scanner data, administrative data)
  - With the health crisis (during the price collection adjournment), an increase in the use of scanner data, online collection, and implementation of collection by phone.



## **01** Communication about the CPI quality

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## **02** Communication about the CPI meaning: production of alternative indices

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**01**

**Communication about the  
CPI quality**

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- An important imputation rate
  - Because some products were no more transacted
  - Because of the adjournment of price collection
- A change in the methodology
- An impact of the collection calendar

## Imputation rate, in % of the consumption

	March	April	May	June	July
Food	12,3	43.2	40	27.3	0,2
Tobacco	0,5	1.3	1	0,4	0,1
Manufactured products	11,9	56.9	47,3	32,6	0,4
Energy	0,9	6.7	5,5	2,8	0,0
Services	9,6	44.7	41,7	23,6	2,3
All-item CPI	9,7	43,5	39,1	24,3	1,3

- Usually, price statisticians do not change a datasource within a year
  - A study impact before the implementation
  - The change in the methodology is introduced with a change in the year: due to the chaining process, no impact on the level of the index
- The change in the collection process may have affected the price measure or the quality of the products
  - The level of the online prices may be different due to different commercial services
  - The level of scanner data prices may be different due to different ways to record special offers
- In order to avoid that
  - Data were carefully and manually checked
  - Changes were made symmetrically when implemented in March/April (begin of the lockdown) and in July (back to normal month)



- Usually, the price collection calendar (4 weeks in the row) is not always centered in the month
  - IT constraints, particular attention to reproduce the potential shift in the sales calendar or in the holidays...
- Before the health crisis, only a general communication on this price calendar
- With the health crisis, we communicated precisely about this calendar
  - Because the users were interested in the impact of the new health measures (that occurred within the month)
  - The sales were postponed

- Methodological notes for each dissemination in order to explain the special issues with Covid-19

[https://www.insee.fr/en/statistiques/documentation/Data%20quality%20Covid19\\_IR\\_05\\_2020.pdf](https://www.insee.fr/en/statistiques/documentation/Data%20quality%20Covid19_IR_05_2020.pdf)

- Warning on the release and on the time series ('U' flag)
- Very detailed table on the imputation rates

# 02

## Communication about the CPI meaning: production of alternative indices

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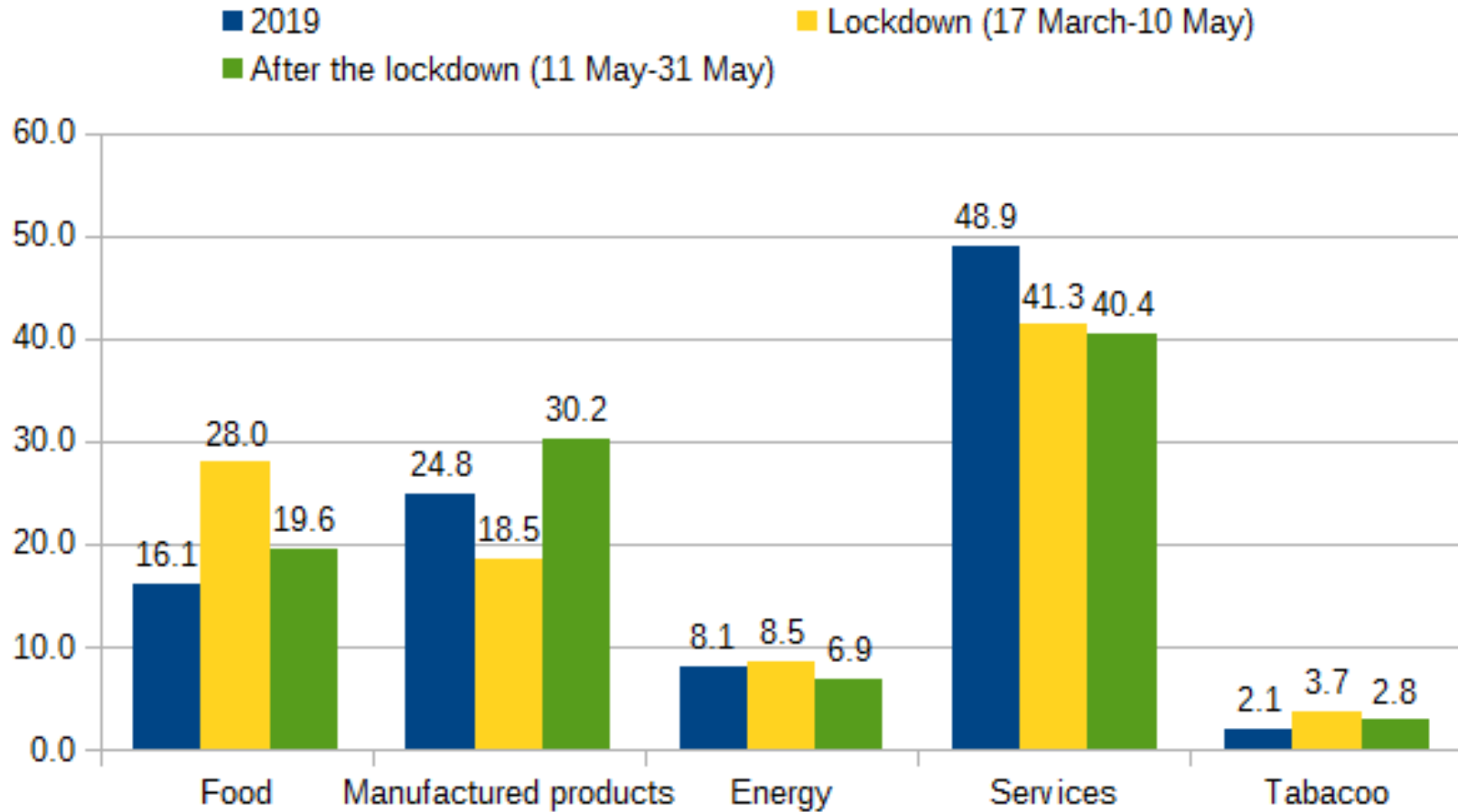
- An important shock on the consumption structure with the Covid-19 crisis

Due to the fact that some outlets were closed, some consumption were prohibited (restaurant, museum...)

The household changed their consumption habit: more lunch at home, less transport...

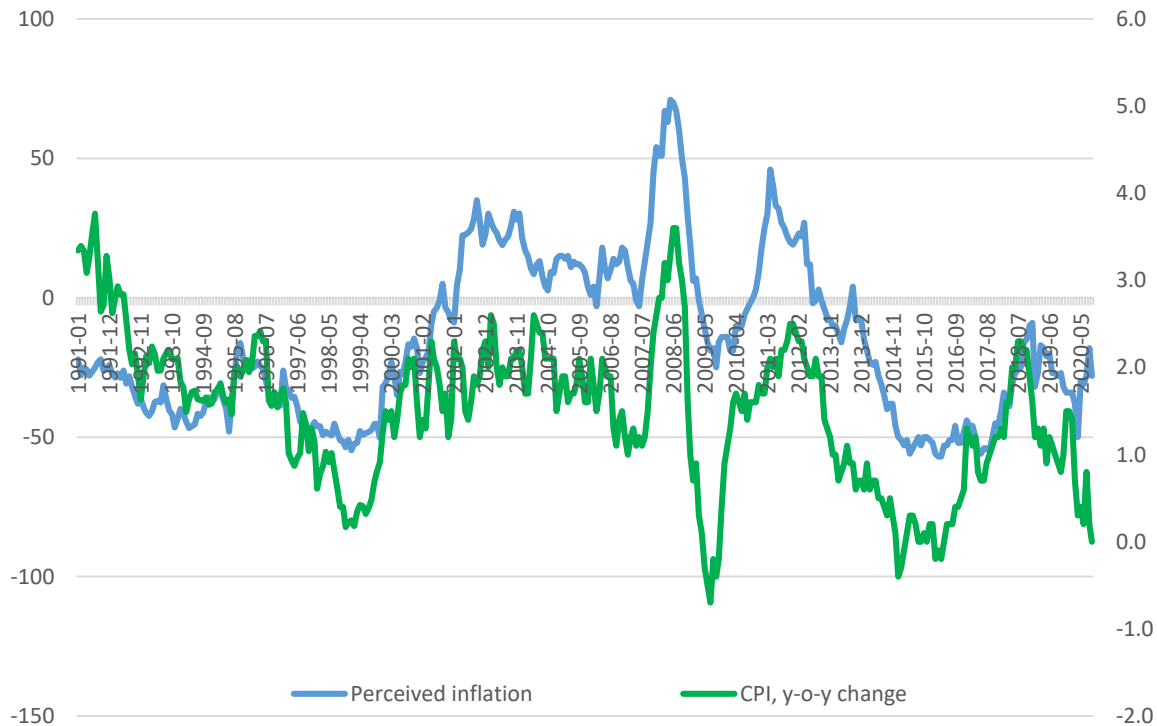
- Since the Covid-19 crisis, Insee has performed a nowcasting exercise for different statistics, among which the consumption

# The shock on the consumption structure



A lot of controversies about the underestimation of inflation by the CPI, in comparison with the perceived inflation.

A Laspeyres-type index is remote from the real consumption basket during the Covid-19 crisis and therefore from the perceived inflation

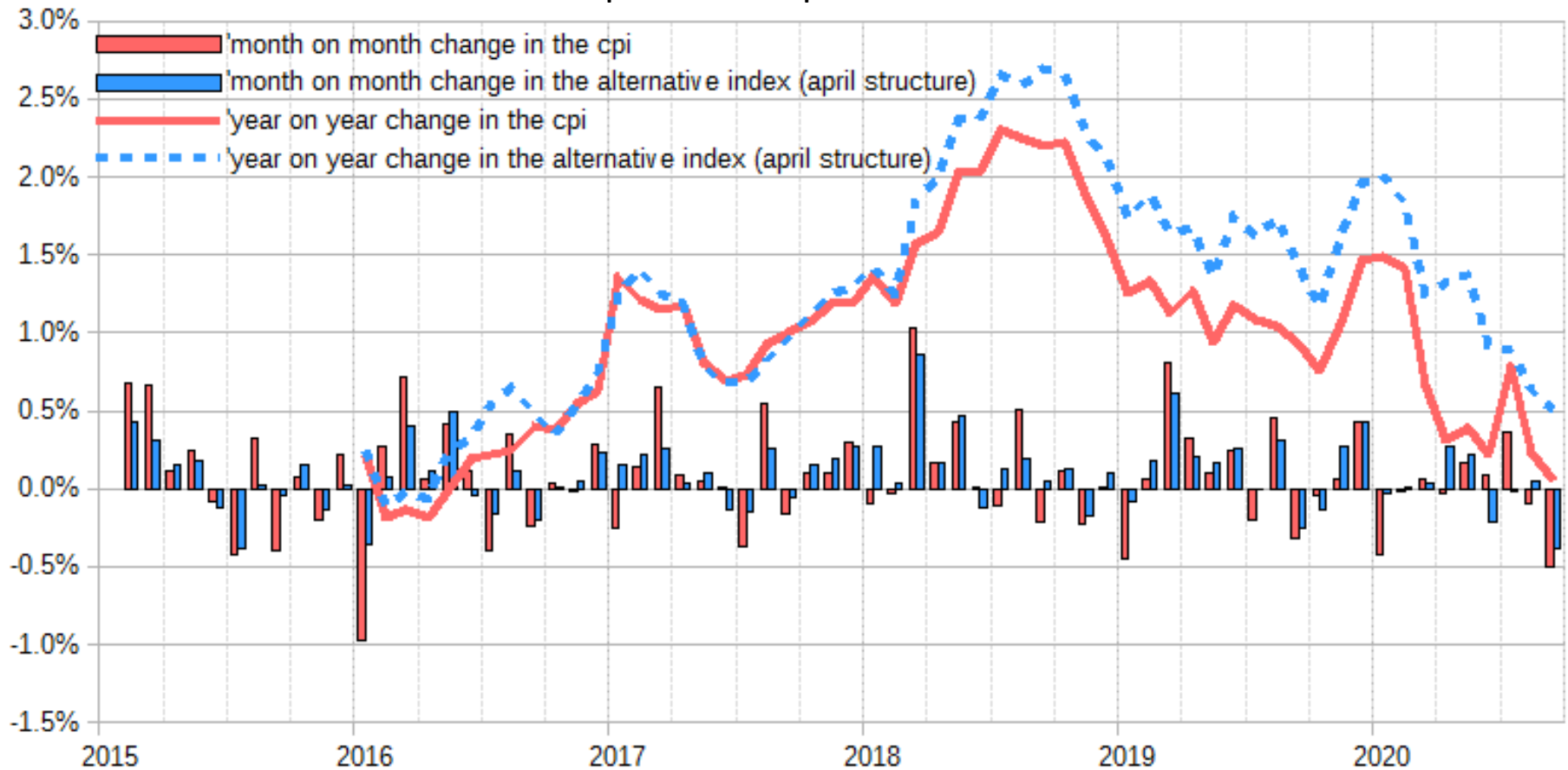


- The proposal of an alternative index to illustrate the impact of the Covid-19 shock on the consumption

Using the consumption structure during the lockdown

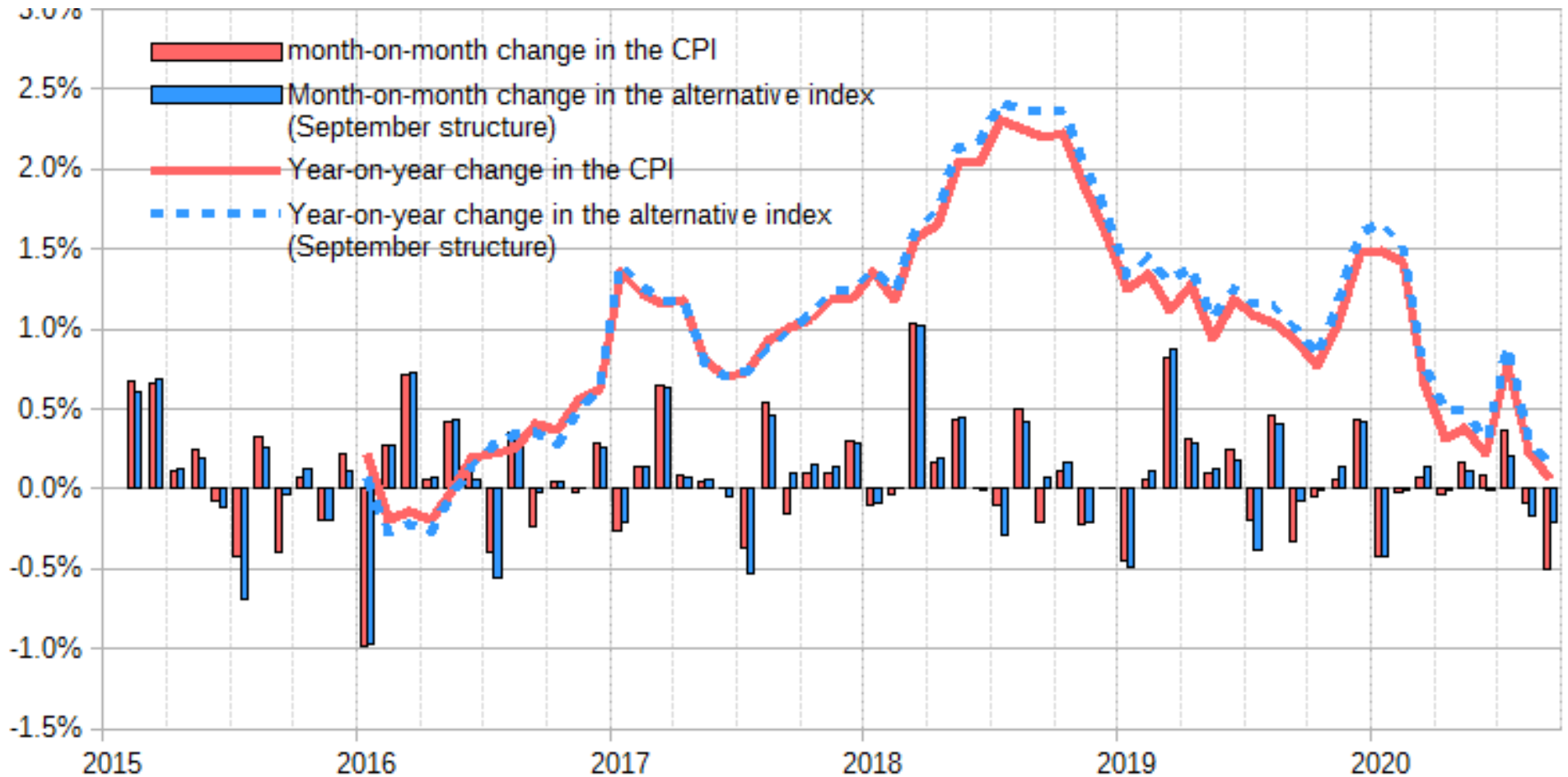
Thanks to the nowcasting exercise (performed for 139 levels of the consumption)

## With the April consumption structure





# In September, the alternative indice with the September structure was not very different from the CPI



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