

During the inflationary period, downtrading behaviours contributed around two points to the decline in food consumption, and the prices of entry-level products rose significantly faster than others

Food inflation was particularly high in 2022 and 2023, caused by the global economic recovery following the pandemic and Russia's invasion of Ukraine. Faced with price shocks on inputs, the food production chain quickly passed these on to consumer prices, and this had a lasting impact on household spending habits. In particular, the national accounts published by INSEE show a 6.3% drop in the volume of food consumed (excluding tobacco) between 2021 and 2024: -9.4% for fresh food products and -5.5% for agri-food products (excluding tobacco). It rebounded only very slightly in 2025 (+0.3%).

INSEE's household economic outlook survey provides an insight into the strategies adopted by six out of ten French people who say they are cutting back on their food spending. In January 2026, these strategies are evenly split between reducing consumption, cutting out the most expensive products (with or without replacing them) and switching to lower-end products, i.e. purchasing similar products of a lower quality. All these behaviours (reductions in physical quantities and a shift towards lower-end products) result in a decline in consumption volumes as recorded in the national accounts.

To provide a more accurate estimation of the impact of this downshift in consumption patterns on the changes in food consumption by volume within the meaning of national accounting since 2022, it is possible to compare this trend with the trend in physical volumes, i.e. excluding the product range effect, over the same period. The contribution of product range effects to the change in the volume of food consumption can therefore be estimated at -2.0 percentage points between 2021 and 2024, which is one third of the total decline recorded over the period. Pasta, tinned vegetables, biscuits and dairy products are among the items for which the shift towards lower-end alternatives has had the greatest impact on overall consumption. Thanks to high-frequency scanner data from mass retailers, which INSEE uses to calculate price and turnover indices, it is possible to pinpoint more precisely when product range effects began to emerge for the products identified. In this case, they started to appear in late 2022, a few months after the onset of the inflationary wave. The proportion of consumption on products that were initially the cheapest thus rose significantly in the space of a few months, and households appear to have continued these consumption habits ever since, despite prices stabilising and purchasing power increasing in 2024 and 2025.

Scanner data also highlights differing price trends across product ranges between 2022 and 2025. For example, when looking at food consumption as a whole, inflation over the last four years appears to have been more pronounced for entry-level products and more moderate for products positioned in higher-end segments. More specifically, if we divide the quantities sold of each food variety at the start of 2022 into five sub-baskets of equal size, but ranked according to their average prices, we find that between January 2022 and December 2025, the prices of products in the first basket, comprising entry-level products, rose by 10 percentage points more than the overall index, and by 18 percentage points more than the fifth basket, comprising premium products. This means that households whose consumption is more heavily weighted towards entry-level products have been exposed to higher food inflation than the "average" inflation reported in the price index.

Gabriel Benedetti, Cécile Chemin, Martin Monziols et Marine Seilles

Driven by the inflationary wave, household consumption of food products (excluding tobacco) fell by 6% in volume terms between 2021 and 2024

In 2022 and 2023, there was an unprecedented inflationary wave that affected food prices in particular. While in 2021 they were just 2.6 percentage points above their 2019 level, they subsequently rose by 6.8% in 2022 and then by 11.8% in 2023. This meant that by the second half of 2025, they stood 26.0% above their 2019 level (► [Figure 1](#)).

At the same time, the most recent national accounts, published by INSEE in May 2025, show a 6.3% drop in the volume of food consumed (excluding tobacco) between

2021 and 2024: -9.4% for fresh food products and -5.5% for agri-food products (excluding tobacco). No such decline in food consumption over a three-year period had been observed in France since 1950.

In H2 2025, more than one in two households was cutting back on food consumption

To analyse the extent to which the inflationary shock may have altered consumer behaviour, INSEE has expanded its household economic outlook survey (in which 2,000 households are interviewed each month) since the end of 2022 to include a quarterly rotating module of ad hoc questions focusing on their consumption patterns.

French economic outlook

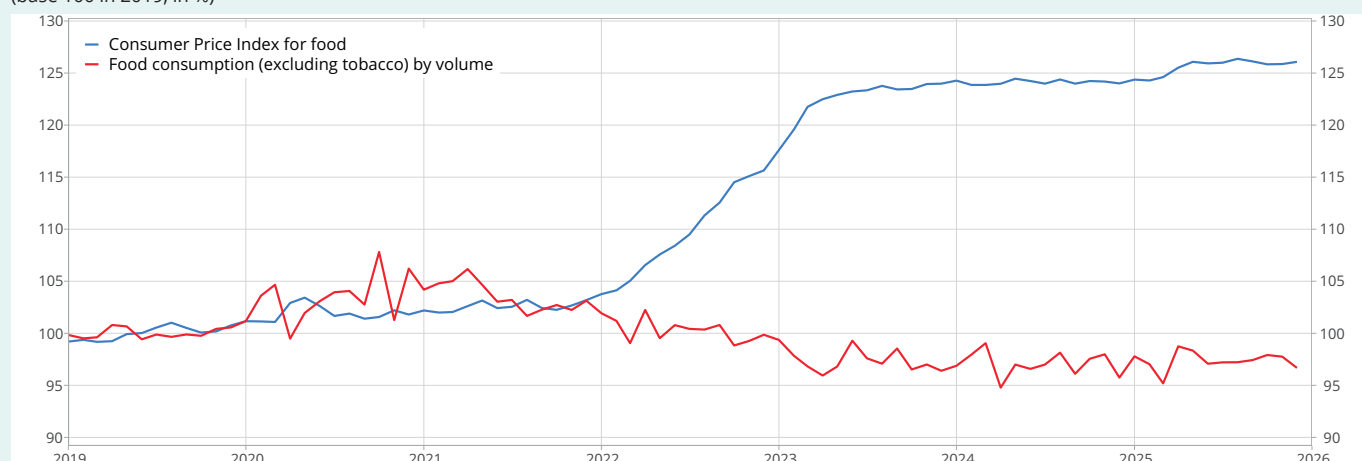
In December 2022, 68% of households said that they had changed their consumption habits over the preceding year due to inflation, with the under-35s most likely to have done so. Among households cutting back, many said they had reduced their energy consumption for their homes (70%) and their food expenditure (54%, ► [Mauro and Palomé, 2023](#)). A year later, in December 2023, three quarters of households said they had changed their consumption habits (an increase of 6 percentage points in a year, driven by households that said they had “significantly changed” their buying behaviour). It was not until 2024-2025 onwards, a period of disinflation that saw food prices gradually stabilise, that these behavioural changes began to ease slightly among the population. In January 2026, only 65% of households surveyed said they had changed their consumption habits over the preceding year.

Since March 2025, households have been surveyed every quarter, as part of the rotating module, on how they are limiting their consumption. An additional question was also introduced from October 2025, asked only of those who said they were cutting back, with the aim of assessing the main strategy used to limit consumption across six main product categories, including food (► [Figure 2](#)).¹ This shows that in January 2026, a large majority of French households were cutting back on their overall consumption (71%) and more than one in two households were limiting their food expenditure (58%). The strategies used were fairly evenly distributed: 17% of households said they were buying fewer goods, 15% were cutting out certain items without replacing them, 13% were opting to buy lower-quality products, and 12% were replacing certain items that had become too expensive with other products. Households’

¹ The five other main product categories for which households were asked about any limitations on their consumption are transport, housing costs, clothing, leisure activities and other everyday consumer goods.

► 1. Food prices and consumption (excluding tobacco)

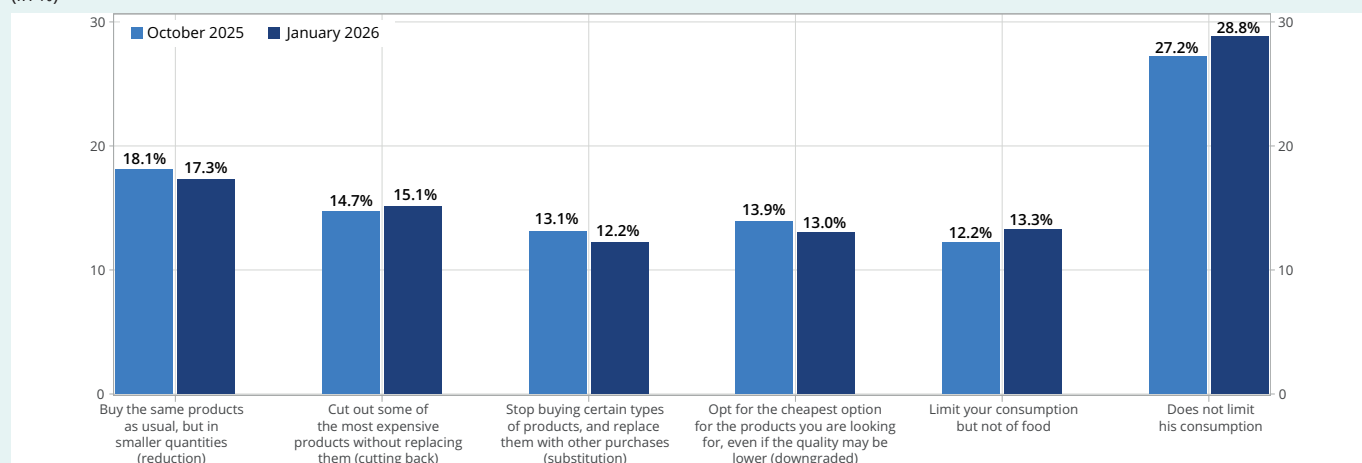
(base 100 in 2019, in %)



How to read it: in January 2025, food consumption (excluding tobacco) by French households fell by 2.6% in volume terms compared with the 2019 average.
Source: INSEE.

► 2. Percentage of households that say they cut back on their food expenditure

(in %)



How to read it: in January 2026, 13% of households said they opted for the cheapest option when shopping for products, even if the quality was not as good.

Scope: households living in mainland France in ordinary housing.

Source: INSEE, monthly consumer confidence survey (CAMME).

strategies varied slightly with age: the under-35s found it easier to switch to alternative products or opt for lower-quality items; older people preferred to stop buying certain products or limit their consumption.

Within the meaning of national accounting, all these behaviours result in a decline in overall food consumption by volume. This is, of course, the case for strategies aimed at reducing the quantities consumed, but it also applies to behaviours involving a shift to lower-end products. The price indices used by INSEE to perform the volume-price split of consumption are similar to “constant-utility” indices within the meaning of microeconomic theory, as they aim to measure the change in expenditure a consumer must make to maintain their utility, in other words, to ensure they receive the same level of “service” or satisfaction for their needs. If the quality of a product decreases (or increases), without any change in its price, consumer utility is reduced (or increased). The price index must therefore treat this as a price increase (or decrease) for the consumer at constant utility (► [Daubaire, 2023](#)).

The effects of consumers switching to lower-end products contributed 2 percentage points to the decline in food consumption between 2021 and 2024

The exact impact of households’ strategies to switch to lower-end products in food consumption between 2021 and 2024 can be estimated by comparing, at a granular level and on a product-by-product basis, changes in volumes consumed within the meaning of national accounting (including product range effects) with changes in physical volumes (mass, number, etc.).

For most food products, the physical quantities consumed are available in the panellist data used by national accountants to estimate annual household consumption in value terms. This data includes sales figures in both value and physical volume terms from supermarkets and local shops for a wide range of food products over a year (around 800 products). National accountants use the data to track annual household consumption of most agri-food products, as well as some agricultural products (eggs, honey and pulses). The panellist data covers just over 60% of food consumption, and the trend in consumption within this limited scope between 2021 and 2024 is very similar to that of total food consumption excluding tobacco (-5.6%). This similarity suggests that the insights drawn from the analysis of product range effects on the sub-scope can be applied to food consumption as a whole (► [Box](#) on the panellist’s data).

In addition, the data from the panellist tracks sales of various products in physical units (kilograms, litres, consumer units) consumed at the most granular level of

INSEE’s data breakdown.² This makes it possible to define an alternative concept of “volumes” corresponding solely to physical quantities, without including the quality effects included in the volumes used in national accounting (► [Box](#): physical volume indices and product range effects). These volumes are calculated for each product at a granular level, and are then aggregated using average unit prices from the previous year (for example, price per kilogram).

It is then possible to calculate product range effects corresponding to the differences in trends between, firstly, volumes consumed within the meaning of national accounting and, secondly, “physical” volumes as calculated from the panellist data. Furthermore, as it is possible to calculate the contribution of each product to changes in consumption for these two types of volumes, the main products contributing to the product range effect can be identified. Using this approach, households’ strategies for limiting consumption can be divided into two categories:

- Strategies involving switching to similar but lower-quality products, as well as those involving changing retailers to buy the same products more cheaply, will be referred to as “product range effects”. In other words, product range effects include all strategies aimed at reducing unit prices (or prices per weight) within each product category purchased (for example, plain pasta), all other things being equal;
- Other strategies for limiting consumption include buying smaller quantities, as well as changes to the basket’s composition through product substitution (for example, from meat to sweet potatoes). These strategies will be referred to as “decreases in physical volume” on the understanding that, at the aggregate level, the physical volumes of each variety are weighted by their unit price from the previous year. Consequently, any substitution of one product (for example, meat) by another (for example, sweet potatoes) that results in a fall in the price of the basket (using the previous year’s prices) will be treated as a decrease in physical volume, even if the total weight of the basket (in grams) has increased as a result of this substitution.

All in all, food consumption by volume, within the meaning of national accounting and calculated using the panellist data, fell by 5.6% between 2021 and 2024, while “physical” volumes, calculated using the same data, fell by only 3.5% over the same period. If this result is extrapolated to overall food consumption, 2 percentage points of the decline in food consumption calculated by INSEE for the 2021-2024 period would be explained by a shift down the product range, i.e. a switch to similar products with a lower unit price. These cumulative effects over time are estimated to have been small in 2022 (-0.3 percentage points), much

² And at an even more granular level, covering around 800 food products.

French economic outlook

more pronounced in 2023 (-1.4 percentage points) and to have increased further in 2024 (-2.0 percentage points in total, compared with 2021).

Pasta, tinned vegetables, biscuits and dairy products are among the items where the shift towards lower-end products has had the greatest impact on overall consumption

It is possible to calculate how much each product contributes to these product range effects (► [Figure 3](#)). Based on the data from the panellist, these effects were particularly concentrated on products such as pasta, biscuits (within the bread, biscuits and pasta category), tinned vegetables (within the fruit and vegetable products category) and yoghurt (within the dairy products category), which alone contributed -1 percentage point to the shift towards lower-end products. As these foods account for half of the product range effects over the period, the analysis focuses specifically on them.

For these products, the effects of switching to lower-end products were pronounced over the period from 2021 to 2024, accounting for -7.0 percentage points of the 3.8% increase in pasta consumption (contributing -0.1 percentage points to the total aggregate), for -4.5 percentage points of the 4.0% decline in biscuit consumption (contributing -0.3 percentage points to the total aggregate), -7.6 percentage points to the 11.8% decline in consumption of tinned vegetables (contributing -0.3 percentage points to the total aggregate) and -5.8 percentage points to the 4.4% decline in consumption of yoghurt (contributing -0.2 percentage points to the total aggregate).

Product range effects became significant in late 2022, a few months after the start of the inflationary wave

While the panellist data used in the annual national accounts can be used to quantify product range effects in food consumption and identify the main contributing products on an annual basis, it cannot be used to track these effects at a higher frequency, such as monthly or quarterly. However, it is possible to perform a similar analysis with scanner data collected by mass retailers and used by INSEE to calculate consumer price indices and turnover indices. This high-frequency data is comparable to that provided by the panellist, including, in particular, the value of consumption for each product and the physical quantities consumed. In particular, aggregated and anonymised monthly data allows the values sold to be tracked at a very granular level from 2022 through to early 2026. Similar data has already been used to study household responses during the recent period of inflation (► [Loisel and Sixou, 2025](#)).

This means that product range effects can be analysed on a monthly basis and at a more granular level, that is, at the level of the product varieties included in the consumer price indices, across groups of homogeneous products. This type of analysis is carried out for crispbread, tinned peas, plain pasta, natural yoghurt and beef burgers (► [Figure 4](#)).

At variety level, the differences between volume indices and physical volume indices show differing patterns. Consumption of crispbread, plain pasta, natural yoghurt, tinned peas and beef burgers appears to have been

► 3. Contributions to product range effects (contribution to growth, in % points)



How to read it: between 2021 and 2024, product range effects on the consumption of dairy products accounted for -0.5 percentage points of the difference between changes in volumes reported in the national accounts and actual physical volumes.

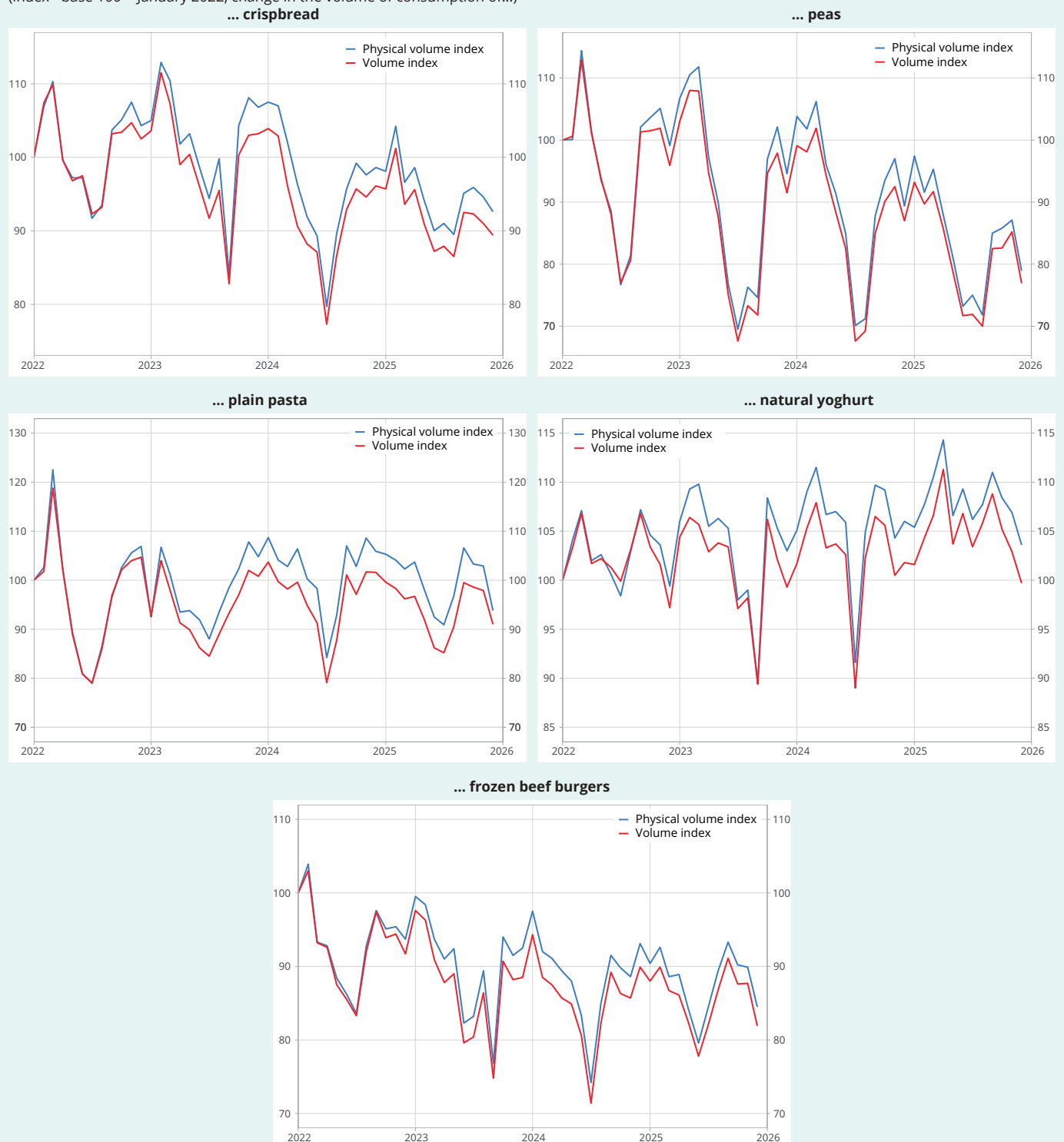
Source: Panéliste, INSEE, INSEE calculations.

affected by product range effects from Q3 2022 onwards, with this trend intensifying in 2023. Changes in consumer behaviour therefore appear to have lagged behind the onset of the inflationary wave by a few months, as food prices began to soar in early 2022. The gap between

the physical volume index and the volume index was still significant at the end of 2025, indicating that, for these products, households have not abandoned the consumption habits adopted during the inflationary crisis.

►4. Monthly product range effects for the main contributing products

(index - base 100 = January 2022, change in the volume of consumption of...)



Last point: December 2025.

How to read it: in January 2024, consumption of plain pasta by volume in the mass retail sector rose by 9% compared with January 2022, while consumption by volume within the meaning of national accounting rose by only 4%.

Source: Retail sales data, INSEE calculations.

A shift towards lower-end products in everyday consumer goods

Another way of understanding the phenomena of switching to lower-end products using scanner data is to look at how sales of the different ranges within the same product variety have changed. The varieties used to calculate consumer price indices comprise products from different brands. Therefore, one possible approach to highlighting changes in consumption habits is to define, at the variety level, groups of products corresponding to different price ranges in early 2022, and then track changes in the proportion of each of these product groups in overall consumption.

Consequently, to examine changes in household consumption habits across certain product ranges, the approach adopted here is to divide products of the same type into five “sub-baskets” of equal quantities sold, ranked by their unit prices at the start of 2022,³ just before the start of the inflationary wave. For products available throughout the period, the change in market share (in physical volume) of the different product quintiles can then be calculated. These five groups are therefore assumed to correspond to categories of increasing quality and to reflect the consumption patterns observed in January and February 2022. Tracking the proportion of physical volumes consumed in each of these five groups within the total volume consumed highlights shifts in consumption between sub-baskets. However, this approach does not allow us to track the behaviour of consumers who have switched retail outlets to continue buying the same brand of product at a more affordable price, as product ranges are defined here on the basis of their average unit price at the start of the period, calculated by aggregating data from all retail outlets.

For the product varieties studied, significant shifts in market share began to emerge from late 2022 or early 2023, confirming the observation made above based on the differences between physical volume and volume within the meaning of national accounting. From this date onwards, the cheapest products, those in the first quintile, gradually gained market share, and a general trend of a shift towards lower-end groups can be observed. Overall, these gains in market share for entry-level products appear to be sustainable and declined only marginally during 2025, confirming that households have maintained the habits they adopted during the inflationary period, despite the rise in purchasing power in 2024 and the sharp decline in inflation. For minced meat, the price of which has been rising sharply since mid-2025, we have even seen a new wave of consumers switching to lower-end product ranges in recent months (► [Figure 5](#)).

Entry-level products are more affected by inflation

Applied research using data from the United States or the United Kingdom (► [Jaravel and O’Connell, 2020](#), ► [Chen, Level and O’Connell, 2024](#)) has demonstrated that inflation varies according to household profiles and their consumption baskets during periods of high inflation, highlighting the limitations of a single food inflation index. Like most other national statistical institutes, INSEE publishes price indices that are broken down by social category or standard of living, taking into account the relative weights of different products in the consumer basket. However, in these index calculations by consumer category, each product is treated in the same way: the change in pasta prices is the same for all indices; only its weighting varies. Consequently, if consumption varies by product range within a given variety (for example, if, as shown in ► [Chen and al., 2024](#), lower-income households consume more entry-level products) and prices do not change in parallel across the different ranges, the inflation trend by household category is subject to bias. During periods of “normal” inflation, it is reasonable to assume that this bias is very small, as the various ranges within the same variety have very similar determining factors. However, the recent inflationary period caused a distortion because it stemmed from a spike in input prices. As a result, entry-level products, which are more sensitive to commodity prices, rose more sharply than others, according to ► [Chen and al., 2024](#).

As in the studies mentioned, it is possible to use scanner data to highlight differences in price trends across product ranges between 2022 and 2025 in France. Based on the price tiers defined earlier for the five products examined, consumer price indices specific to each product range segment in the retail sector can be constructed (► [Figure 6](#)). In most cases, entry-level products see more significant price increases than those that were initially more expensive. For the products examined, inflation thus appears to decrease as product quality increases: the higher the quality of the products, the less they have been affected by the inflationary period. For example, in the case of pasta, the gap in price growth between the different product ranges widened significantly during the period of high inflation, before narrowing slightly from mid-2024 onwards. Conversely, for other product varieties such as natural yoghurt, which also saw significant differences in price increases during the period of high inflation, the gap has not narrowed since then: entry-level products therefore remain relatively more expensive than they were before 2022, suggesting a more persistent shift in the price structure across product ranges.

³ The five “sub-baskets” are defined at the start of the period so that they correspond to the same physical quantity of products sold (in grams or litres).

It is also possible to apply this approach more broadly by defining five baskets of goods corresponding to the different product ranges for all agri-food varieties (► [Box](#) and ► [Figure 7](#)). A price index can be defined for each of these baskets, providing a way to track changes in the cost

of a representative basket for each product range segment. Although these indices have their limitations, they provide valuable insight into inflation broken down by product range since 2022.

► 5. Changes in market share by product range in terms of physical volume for the products tracked

(in %, changes in the quintiles from early 2022 for...)



Last point: December 2025.

Note: the brands tracked accounted for approximately 90% of total sales of the products in question for each month between January 2022 and December 2025. The remaining 10% reflects the discontinuation and launch of a few products between early 2022 and late 2025.

How to read it: in December 2025, the products accounting for 20% of the sales by weight of the cheapest plain pasta in January 2022 accounted for 27% of sales by weight.

Source : Retail sales data, INSEE calculations.

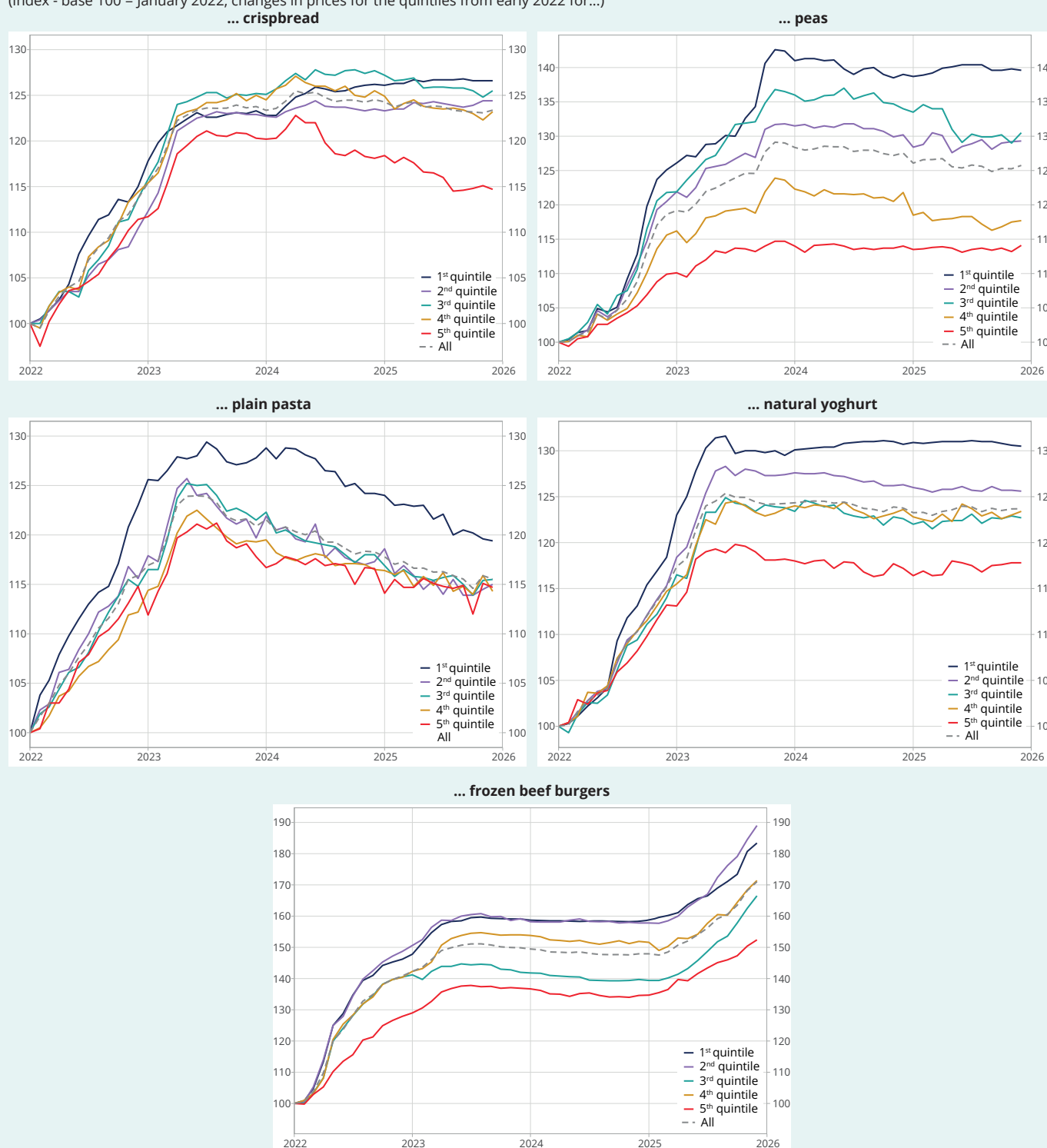
French economic outlook

Across the board, inflation in supermarket food prices (excluding fresh food) was more pronounced for the entry-level basket and more moderate for the premium basket. Between January 2022 and December 2025, the prices of products in the first sub-basket (representing entry-level products) rose by 10 percentage points more than the overall index, and by 18 percentage points more than those

observed for products in the fifth sub-basket (representing premium products). The findings reported by [Chen and al., 2024](#) for the United Kingdom therefore appear to be borne out by the French data: for many food varieties, the inflationary period led to a narrowing of the price gap between entry-level and premium products. While in January 2022 the average basket was twice as expensive as the

► 6. Price trends by product range for the products tracked

(index - base 100 = January 2022, changes in prices for the quintiles from early 2022 for...)



Last point: Decembre 2025.

Note: the indices are calculated on a January 2022 basis.

How to read it: in July 2023, the prices of natural yoghurt in the entry-level range were 30% higher than in January 2022.

Scope: hypermarkets and supermarkets in mainland France, excluding hard discount chains.

Source: Retail sales data, INSEE calculations.

entry-level basket, by the end of 2025 it was 1.87 times as expensive. The gap between the premium basket and the entry-level basket has also shrunk, with the ratio falling from 2.87 to 2.49.

This trend that is specific to the cheapest products could be partly explained by the fact that margins in these segments are initially lower, limiting the ability of producers and distributors to absorb cost increases by reducing their margins (► [Observatoire de la formation des prix et des marges des produits alimentaires, 2024](#)). Consequently, households whose spending is more heavily weighted towards these products have likely been exposed to higher inflation on consumer goods than others. They appear to have suffered a form of “double whammy”: higher inflation coupled with an inability to adjust their spending by switching to cheaper products, as they were already buying the cheapest items available.

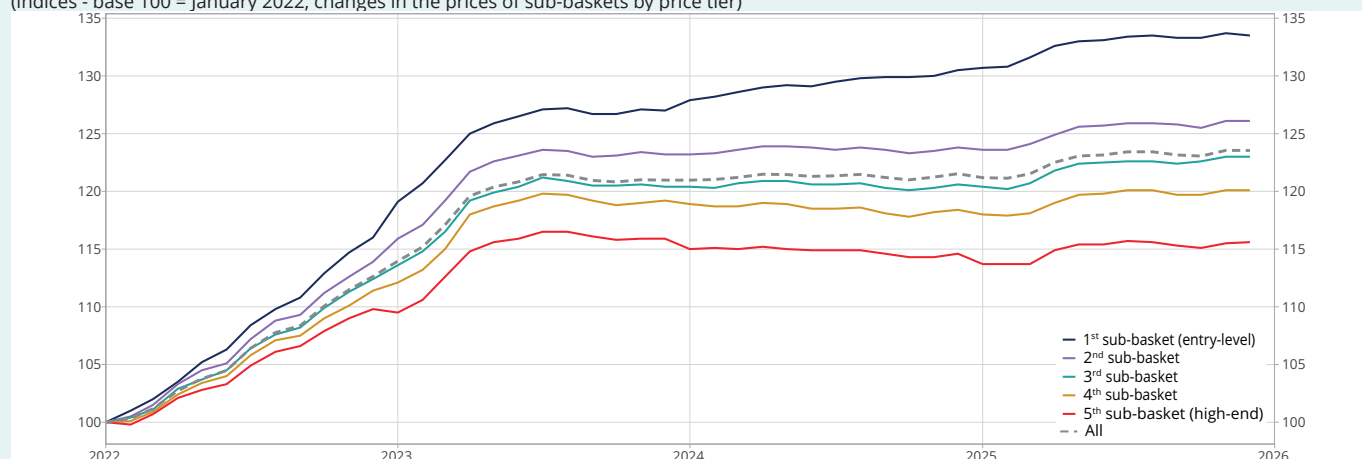
At most, assuming - in an extreme scenario - that some households consumed only entry-level products, this effect, observed solely in non-fresh food products, would have

increased cumulative inflation by around one percentage point between 2022 and 2025 (with total inflation over the period standing at +13.6%). This is a maximum estimate and an order of magnitude: the work carried out here is exploratory and does not constitute a statistical analysis. In particular, the price tiers are approximated, for the sake of simplicity, by dividing the products within a given variety into quintiles based on unit price.

Ultimately, this innovative study sheds light, firstly, on consumer behaviour when faced with rising food prices, and, secondly, on the differences in price increases across different price tiers within the non-fresh food and non-tobacco product segment during the inflationary period. It also highlights the impact that different price dynamics across product ranges can have on a hypothetical basket of goods during periods of high inflation, which can result in significant disparities in the inflation experienced by different types of households. This vertical differentiation aspect is obscured by indicators compiled at the macroeconomic level, as it requires much more granular data on the household basket than is currently available. ●

► 7. Price index by product range - total food expenditure excluding fresh food

(indices - base 100 = January 2022, changes in the prices of sub-baskets by price tier)



Last point : December 2025.

Notes: the indices are calculated on a January 2022 basis.

How to read it: in January 2024, the food price index for the entry-level range was 28% higher than in January 2022, while the index for the premium range was 15% higher than in January 2022.

Scope: hypermarkets and supermarkets in mainland France, excluding hard discount chains.

Source: Retail sales data, INSEE calculations.

Box: 1: CAMME Questionnaire

Every month, INSEE conducts an economic outlook survey of 2,000 households living in mainland France (CAMME). This survey aims to gather, in near real time, their opinions on both their economic environment and their personal situation.

In addition to the questions that have been asked on a recurring basis every month since 1987 ("core" questions), the survey has included, since 2022, a rotating module of ad hoc questions that may vary from one quarter to the next depending on the main topics of current interest. For example, a series of questions on the reasons for saving and limiting consumption has been repeated every quarter since March 2025 (► [Cupillard and Palomé, 2025](#)).

The questions examined in this Focus are limited to the quarterly questions from the rotating module.

Questions from the rotating module, asked every quarter, on consumer behaviour (items in italics are read out by interviewers only if necessary):

Question on consumption habits, asked to all households every quarter since December 2022.

• **Over the past year, have you changed your consumption habits because of inflation?**

(The term "inflation" should be understood as a general rise in the level of prices. This results in a rise in the cost of living)

1. not at all
2. a little
3. a lot

Question on limiting consumption, asked to all households since March 2025 (i.e. in March, July and October 2025, and January 2026):

• **Are you currently trying to limit your consumption?**

(Only one answer possible; whether it relates to your everyday consumption (food, clothing, heating, etc.) or more occasional items (buying a car, repairs, holidays, etc.))

1. to make ends meet
2. to put money aside
3. to limit my environmental impact
4. for other reasons (for example, due to an upcoming change in family or professional circumstances)
5. not really

Questions on items subject to reduced consumption, asked from October 2025 onwards (in October 2025 and January 2026) exclusively to households that said they were limiting their consumption (71% of households in January 2026):

• **Are you trying to cut back on what you spend on food?**

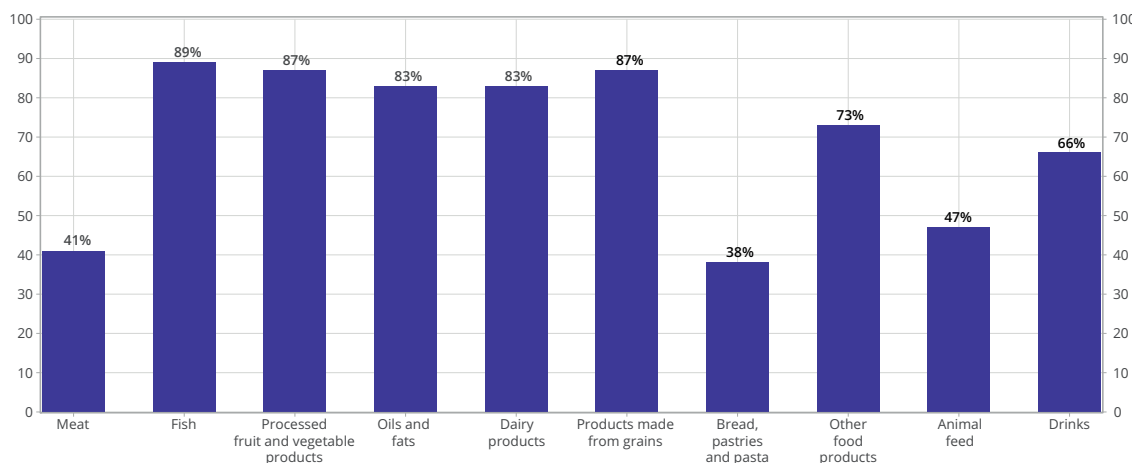
1. No
2. I buy the same products as usual, but in smaller quantities
3. I'm cutting out some of the more expensive items without replacing them (for example, by no longer buying meat)
4. I'm cutting out certain types of products and replacing them with other purchases (for example, buying apples instead of strawberries)
5. I tend to go for the cheapest option when it comes to the products I'm looking for, even if the quality might not be as good. ●

Box 2: Representativeness of the panellist data on household food consumption

For agri-food products excluding tobacco, the sales tracked by the panellist accounted for 62.5% of consumption by value, as measured by INSEE in 2024. For certain products that are mainly purchased outside supermarkets and grocery shops, the annual consumption figures in value terms used by national accountants are derived primarily from other sources. This is the case in particular for meat, wine, bakery products, sandwiches, food supplements and other artisanal or home-produced goods. Consequently, the panellist data is not particularly representative of total household consumption recorded in the national accounts for these products (► **Figure A**). Furthermore, with regard to agricultural products, the sales tracked by the panellist are fairly marginal (accounting for less than 7% in 2024), as they are limited to just a few products.

Over the recent period, household food consumption within the scope of the data tracked by the panellist has followed a volume trend¹ comparable to that of total agri-food consumption (excluding tobacco) as measured by the national accounts (► **Figure B**): insights into total household food consumption can therefore be drawn from the analysis of product range effects within this narrower scope.

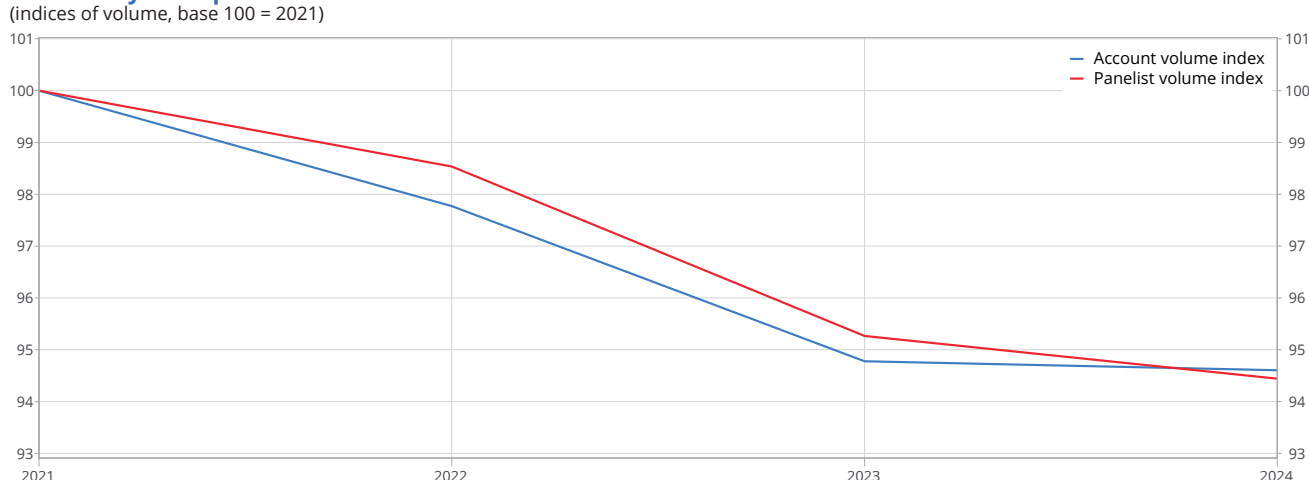
► A. Percentage of the panellist's sales in total agri-food sales (excluding tobacco) in the national accounts in 2024 (in %)



How to read it: in 2024, the sales figures reported by the panellist in constant euros for processed or tinned fish products accounted for 89% of the sales recorded in the national accounts.

Source: Panéliste, INSEE, INSEE calculations.

► B. Comparison of volumes published by INSEE in the national accounts and volumes reconstructed exclusively from panellist data (indices of volume, base 100 = 2021)



How to read it: between 2021 and 2024, volumes of agri-food products (excluding tobacco) published by INSEE fell by 5.4%, while volumes of food products consumed, reconstructed from panellist data, fell by 5.6%.

Source: Panéliste, INSEE, INSEE calculations.

¹ It is possible to reconstruct a volume (within the meaning of national accounting, i.e. including quality effects) within the scope of the panellist's data by using the sales figures in euros derived from this data, together with INSEE's consumer price indices.

Box 3: National accounting volumes, physical volumes and quality effects

National accounting volumes

At the most granular level of product varieties, national accounting defines volumes at constant prices: these are obtained by deflating sales in constant euros using the consumer price index.

By definition, this price index is similar to a constant-quality index: it measures a pure change in price by adjusting for the quality effect. Thus, if consumption shifts towards lower-end products, the fall in prices associated with this move down the range will not be reflected in the index, as these shifts affect volumes, not prices.

At the most granular level, the consumption in volume terms of variety i in year t , within the meaning of national accounting, is expressed as:

$q_{i,t} = \frac{p_{i,t_0}}{p_{i,t}} Val_{i,t}$, where $p_{i,t}$ is the average price of variety i in year t , $Val_{i,t}$ is its consumption in value terms and p_{i,t_0} its price in the reference year t_0 . The volume index at constant prices with base t_0 is then written as $I_{V,i,t} = \frac{q_{i,t}}{q_{i,t_0}}$.

The volumes are chain-linked as follows:

$I_{V,t} = I_{V,t-1} \sum_i \frac{I_{V,i,t}}{I_{V,i,t-1}} \frac{Val_{i,t-1}}{\sum_j Val_{j,t-1}}$ where $Val_{i,t}$ corresponds to the consumption in value terms of variety i at time t , in constant euros.

Physical volumes

The data from the panellist used in annual national accounting, like scanner data, provides information on sales of various products in physical units (kilograms, litres or consumer units).

At the most granular level, the physical volume index for a variety i can be written directly as:

$I_{VP,i,t} = \frac{\varphi_{i,t}}{\varphi_{i,t_0}}$, where $\varphi_{i,t}$ is the physical volume of product i consumed over the period t , and φ_{i,t_0} is the physical volume of i consumed over the reference period t_0 .

For annual data, a Laspeyres aggregate index chain-linked to the previous year's prices can be calculated in the standard way:

$I_{VP,t} = I_{VP,t-1} \sum_i \frac{I_{VP,i,t}}{I_{VP,i,t-1}} \frac{Val_{i,t-1}}{\sum_j Val_{j,t-1}}$ where $Val_{i,t}$ corresponds to the consumption in value terms of product i at time t , in constant euros. Physical volumes do not therefore take product range effects into account.

For monthly data, as the volume indices and physical volume indices are compiled at a very granular level (at the level of a specific variety), they correspond exactly to the volume indices and physical volume indices at constant prices. These are simply sales in value terms deflated by the consumer price index for the variety, without volume chain-linking for the former, and the physical quantity (in kilograms, litres or consumer units) for the latter.

Product range effects

At the most granular level, range effects result in a difference in trend between national accounting volume indices and physical volume indices. Given that the aggregation method is the same for both types of volume, any differences between their respective trends can be attributed, at any level of aggregation, to product range effects.

Tracking market share by distribution quintiles

For each variety of interest (crispbread, tinned peas, plain pasta, natural yoghurt and beef burgers), five baskets are defined over the period, ranking the products from cheapest to most expensive in terms of unit price, so that these five baskets correspond to the same sales volume in physical units (kilograms or litres) in January 2022. Market shares in physical volume terms are then tracked monthly between February 2022 and December 2025. ●

Box 4: Calculating food inflation by product range

Identifying the different ranges for a product

For the purposes of this study, “product ranges” are defined for each product variety based on their average unit price (across all retail outlets). For each variety, the five product ranges identified correspond to the products which, at the start of 2022, represented the five “sub-baskets” of equal quantities sold, ranked by their unit prices and weighted by market share. The entry-level product range for a particular variety thus corresponds to the cheapest products in that variety, which accounted for 20% of the physical volume sold in early 2022 (grams or litres). The product ranges are then revised each year based on the previous year’s sales.

By definition, this classification of product ranges does not take the retail outlet into account: the same product may be sold at different prices depending on the supermarket in question, meaning that the average price of the product will also be influenced by changes in retail outlet. This can, in particular, lead to an underestimation of inflation measured for premium products sold across all retail chains: if households have continued to purchase these products by switching retail outlets to obtain the same product at a lower price, this moderates the average price for the product measured in the sample, all other things being equal, and therefore the inflation measured for that product. This represents a departure from the standard method used in the CPI, which tracks cross-sections of products and retail outlets to calculate inflation. It was not possible to replicate this methodology in this analysis, as INSEE is unable to retain data on retail outlets beyond the period required to produce the index. However, the price changes calculated in this Focus closely mirror those published in the CPI, which means that robust conclusions can be drawn from them.

To ensure comparability over time, only products available in both January 2022 and December 2025 are included. This introduces a restriction, as some products have been discontinued and others have been introduced during this period: in December 2025, new products (which did not exist in January 2022) accounted for around a third of turnover in the scanner data.

Calculating food inflation by product range

To calculate food inflation by product range based on the inflation model published by INSEE, consumer price indices are then compiled for each range of varieties as Laspeyres indices chain-linked from one year to the next. To aggregate the varieties within a given product range, CPI weights are used, and the product range baskets are redefined each year.

To ensure that the chosen approach accurately replicates the index published by INSEE, the average increase in prices for all food products is calculated by averaging the price indices of the five baskets. This is then compared with the increase in the published index. All in all, the five baskets considered showed a slightly higher average increase since January 2022 than that of the published index (+22% compared with +24% respectively). The difference in growth is, however, limited, which validates the chosen approach. ●

Bibliography

Mauro L. and Palomé N. (2023) “In 2022, faced with rising prices, households changed their consumption habits”, *Economic outlook*, March 2023, INSEE.

Loisel T. and Sixou J. (2025) “How do consumers adjust their food purchases during periods of inflation?”, *Insee Analyses*, INSEE.

Daubaire A. (2023) “Shrinkflation, « effet qualité », évolution de l’offre de produits : comment l’Insee mesure-t-il le juste prix ? », INSEE Blog, article published on 15 December 2023, INSEE.

Parlement (2024), Report to Parliament, Observatory on Food Price and Margin Formation (in French).

Jaravel X. and O’Connell M. (2020), “Real-time price indices: Inflation spike and falling product variety during the Great Lockdown”, *Journal of Public Economics*.

Chen T., Level P. and O’Connell M. (2024), “Cheapflation and the rise of inflation inequality”, Institute for Fiscal Studies. ●